

**SEPTEMBER 2002  
VOLUME 44  
NUMBER 9**

# **STORM DATA**

**AND UNUSUAL WEATHER PHENOMENA  
WITH LATE REPORTS AND CORRECTIONS**



**noaa**

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL ENVIRONMENTAL SATELLITE, DATA AND INFORMATION SERVICE  
NATIONAL CLIMATIC DATA CENTER, ASHEVILLE, NC

**Cover:** A solar wind shock wave swept past Earth on September 7, 2002. This caused a strong (G3-class) geomagnetic storm, named the Aurora Borealis, also called the “Northern Lights”. *(Photo courtesy: Grant Goodge, Asheville, North Carolina)*

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### **STORM DATA**

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**STORM DATA** contains all confirmed information on storms available to our staff at the time of publication. Late reports and corrections will be printed in each edition.

Except for limited editing to correct grammatical errors, the data in Storm Data are published as received.

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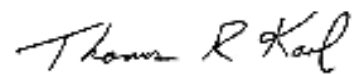
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The editor of **STORM DATA** solicit your help in acquiring photographs (prints or slides; black and white, or color), maps, clippings, etc. of significant or severe weather events (past or present) for use in the “Outstanding Storms of the Month” section of **STORM DATA**. We request our subscribers or other interested persons to mail such items to:

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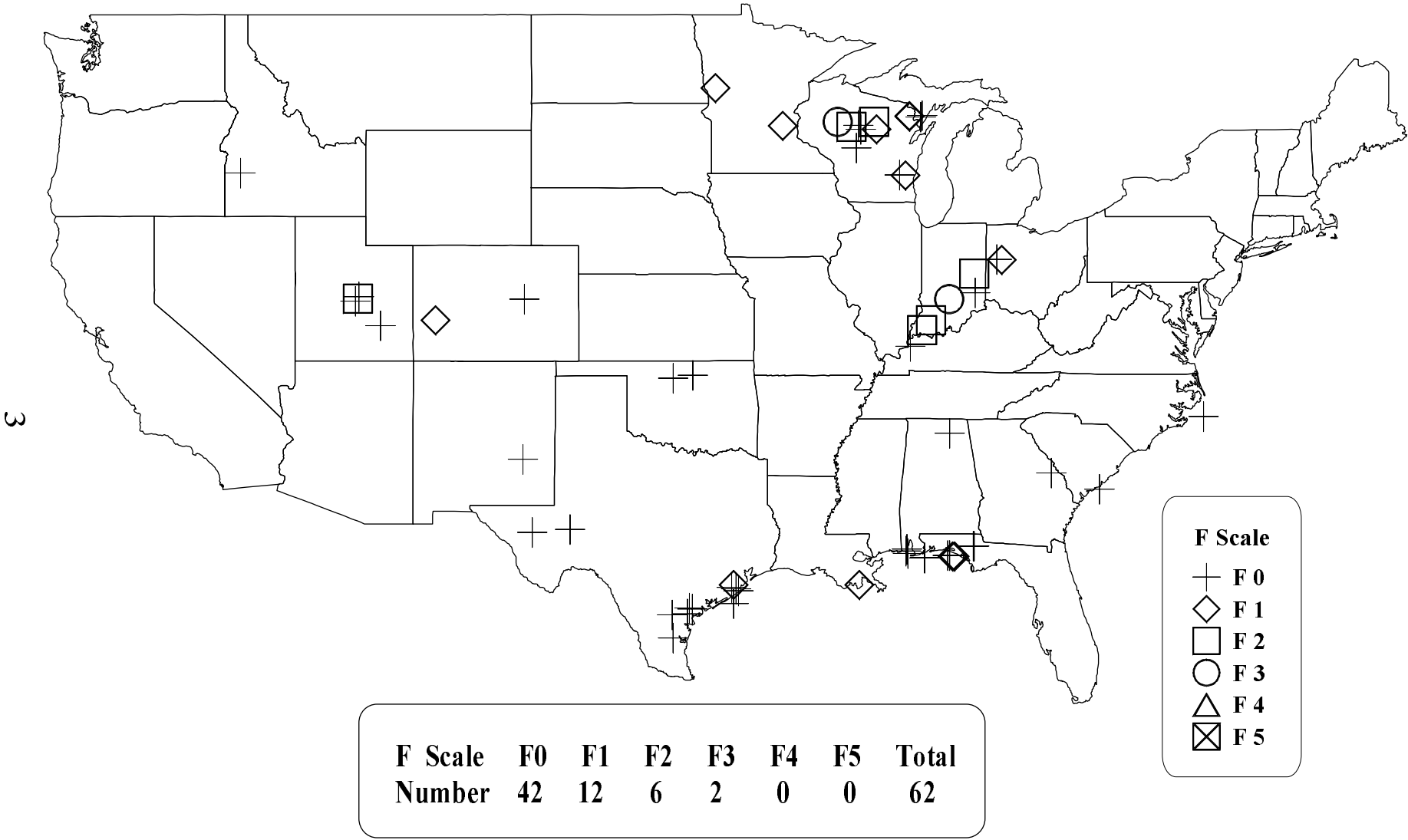
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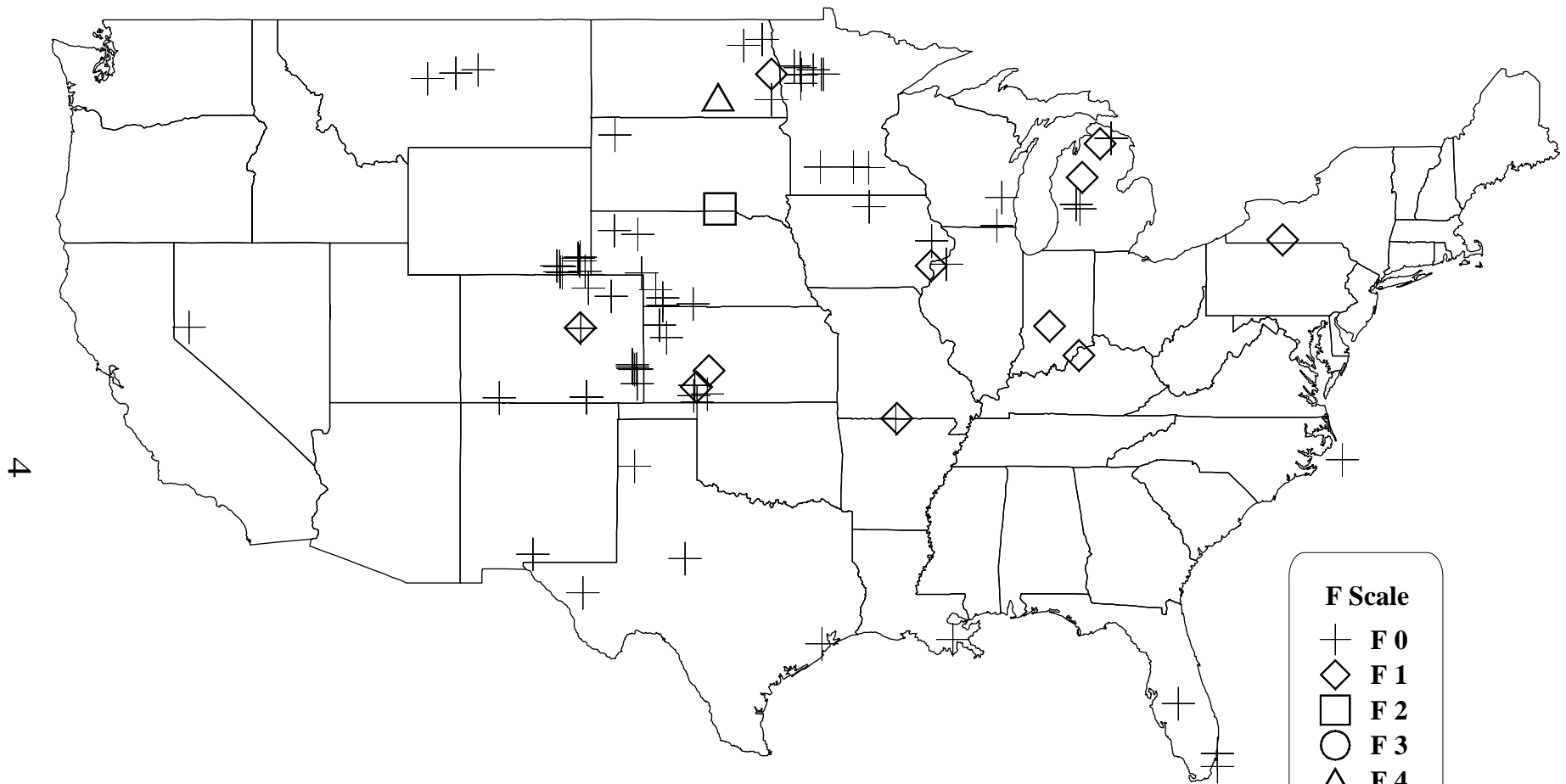


Thomas R. Karl  
Director,  
National Climatic Data Center

# September 2002 Confirmed Tornadoes



# Corrected August 2002 Confirmed Tornadoes



## F Scale

- + F 0
- ◇ F 1
- F 2
- F 3
- △ F 4
- ⊠ F 5

| F Scale | F0 | F1 | F2 | F3 | F4 | F5 | Total |
|---------|----|----|----|----|----|----|-------|
| Number  | 73 | 11 | 1  | 0  | 1  | 0  | 86    |

**OUTSTANDING STORMS OF THE MONTH**

**THERE IS NO  
“OUTSTANDING STORM OF THE MONTH”  
FOR THE MONTH OF SEPTEMBER 2002.**

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |                   |                                  |                           |                          |                      |          |                     |          |                                |
|--|-------------------|----------------------------------|---------------------------|--------------------------|----------------------|----------|---------------------|----------|--------------------------------|
| Location   | Date              | Time<br>Local/<br>Standard       | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |          | Estimated<br>Damage |          | Character of Storm             |
|  |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>ALABAMA, Central</b>  |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>ALZ006</b>  | <b>Madison</b>    |                                  |                           |                          |                      |          |                     |          |                                |
|  | <b>10</b>         | <b>1500CST</b>                   |                           |                          | <b>0</b>             | <b>0</b> | <b>0</b>            | <b>0</b> | <b>Excessive Heat</b>          |
| The afternoon high temperature measured at the Huntsville International Airport was 99 degrees. This temperature established a new record high temperature. The previous record was 94 degrees last set in 1990.   |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>ALZ002</b>  | <b>Colbert</b>    |                                  |                           |                          |                      |          |                     |          |                                |
|  | <b>10</b>         | <b>1500CST</b>                   |                           |                          | <b>0</b>             | <b>0</b> | <b>0</b>            | <b>0</b> | <b>Excessive Heat</b>          |
| The high temperature observed at the Muscle Shoals Municipal Airport was 97 degrees. This temperature established a new record high.   |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>ALZ006</b>  | <b>Madison</b>    |                                  |                           |                          |                      |          |                     |          |                                |
|  | <b>11</b>         | <b>1500CST</b>                   |                           |                          | <b>0</b>             | <b>0</b> | <b>0</b>            | <b>0</b> | <b>Excessive Heat</b>          |
| The high temperature observed at the Huntsville International Airport was 96 degrees. This temperature established a new record high temperature. The previous record was 95 degrees last set in 1983.   |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>ALZ019</b>  | <b>Calhoun</b>    |                                  |                           |                          |                      |          |                     |          |                                |
|  | <b>11</b>         | <b>1500CST</b>                   |                           |                          | <b>0</b>             | <b>0</b> | <b>0</b>            | <b>0</b> | <b>Excessive Heat</b>          |
| The afternoon high temperature measured at the Anniston Municipal Airport was 97 degrees. This temperature established a new record high.  |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>ALZ044</b>  | <b>Montgomery</b> |                                  |                           |                          |                      |          |                     |          |                                |
|  | <b>11</b>         | <b>1500CST</b>                   |                           |                          | <b>0</b>             | <b>0</b> | <b>0</b>            | <b>0</b> | <b>Excessive Heat</b>          |
| The high temperature observed at Dannelly Field was 99 degrees. This temperature established a new record high. The previous record was 98 degrees set back in 1962.   |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>ALZ044</b>  | <b>Montgomery</b> |                                  |                           |                          |                      |          |                     |          |                                |
|  | <b>12</b>         | <b>1500CST</b>                   |                           |                          | <b>0</b>             | <b>0</b> | <b>0</b>            | <b>0</b> | <b>Excessive Heat</b>          |
| The high temperature measured at Dannelly Field was 98 degrees. This temperature tied the previous record high.  |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>Lamar County</b>  |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>Vernon</b>  | <b>16</b>         | <b>1317CST</b>                   |                           |                          | <b>0</b>             | <b>0</b> | <b>3K</b>           | <b>0</b> | <b>Thunderstorm Wind (G50)</b> |
| Trees and power lines were blown down on SR 17 and on SR 18 near Vernon.   |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>Madison County</b>  |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>1.7 S Meridianville</b>   | <b>18</b>         | <b>1340CST</b><br><b>1341CST</b> | <b>0.1</b>                | <b>20</b>                | <b>0</b>             | <b>0</b> | <b>0</b>            | <b>0</b> | <b>Tornado (F0)</b>            |
| A small tornado touched down briefly in a cotton field just southwest of the intersection of Countess Road and US 231 just south of Meridianville. A storm spotter video taped the funnel cloud just prior to the touchdown. Beg: 34 49.627/86 34.441 End: 34 49.686/86 34.360 |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>Madison County</b>  |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>Monrovia</b>  | <b>18</b>         | <b>1600CST</b>                   |                           |                          | <b>0</b>             | <b>0</b> | <b>8K</b>           | <b>0</b> | <b>Thunderstorm Wind (G50)</b> |
| Trees were blown down in and near Monrovia. One tree fell onto a vehicle causing minor damage.   |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>Morgan County</b>   |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>Decatur</b>   | <b>20</b>         | <b>1900CST</b>                   |                           |                          | <b>0</b>             | <b>0</b> | <b>15K</b>          | <b>0</b> | <b>Lightning</b>               |
| Lightning struck two homes in the Decatur area. Both homes caught on fire and sustained varying degrees of damage. No injuries were reported.  |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>Cullman County</b>  |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>Bremen</b>  | <b>20</b>         | <b>1935CST</b>                   |                           |                          | <b>0</b>             | <b>1</b> | <b>0</b>            | <b>0</b> | <b>Lightning</b>               |
| One person was struck by lightning at Cold Springs High School. The extent of injuries was unknown.  |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>Clay County</b>   |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>Countywide</b>  | <b>22</b>         | <b>0200CST</b><br><b>0430CST</b> |                           |                          | <b>0</b>             | <b>0</b> | <b>10K</b>          | <b>0</b> | <b>Flash Flood</b>             |
| <b>Randolph County</b>   |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>Countywide</b>  | <b>22</b>         | <b>0200CST</b><br><b>0430CST</b> |                           |                          | <b>0</b>             | <b>0</b> | <b>200K</b>         | <b>0</b> | <b>Flash Flood</b>             |
| <b>Jefferson County</b>  |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>Countywide</b>  | <b>22</b>         | <b>0300CST</b><br><b>0900CST</b> |                           |                          | <b>0</b>             | <b>0</b> | <b>5.8M</b>         | <b>0</b> | <b>Flash Flood</b>             |
| <b>Shelby County</b>   |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>Countywide</b>  | <b>22</b>         | <b>0400CST</b><br><b>0930CST</b> |                           |                          | <b>0</b>             | <b>0</b> | <b>100K</b>         | <b>0</b> | <b>Flash Flood</b>             |
| <b>St. Clair County</b>  |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>Countywide</b>  | <b>22</b>         | <b>0400CST</b><br><b>0600CST</b> |                           |                          | <b>0</b>             | <b>0</b> | <b>20K</b>          | <b>0</b> | <b>Flash Flood</b>             |
| <b>Talladega County</b>  |                   |                                  |                           |                          |                      |          |                     |          |                                |
| <b>Countywide</b>  | <b>22</b>         | <b>0400CST</b><br><b>0900CST</b> |                           |                          | <b>0</b>             | <b>0</b> | <b>20K</b>          | <b>0</b> | <b>Flash Flood</b>             |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## ALABAMA, Central

### **Chilton County**

|                   |           |                |  |  |          |          |            |          |                    |
|-------------------|-----------|----------------|--|--|----------|----------|------------|----------|--------------------|
| <b>Countywide</b> | <b>22</b> | <b>0630CST</b> |  |  | <b>0</b> | <b>0</b> | <b>10K</b> | <b>0</b> | <b>Flash Flood</b> |
|                   |           | <b>0930CST</b> |  |  |          |          |            |          |                    |

### **Tuscaloosa County**

|                   |           |                |  |  |          |          |            |          |                    |
|-------------------|-----------|----------------|--|--|----------|----------|------------|----------|--------------------|
| <b>Countywide</b> | <b>22</b> | <b>0630CST</b> |  |  | <b>0</b> | <b>0</b> | <b>50K</b> | <b>0</b> | <b>Flash Flood</b> |
|                   |           | <b>0900CST</b> |  |  |          |          |            |          |                    |

Very heavy rain fell across central Alabama during the early morning hours. The heaviest rain was measured generally from Tuscaloosa to Birmingham to Wedowee. Radar-estimated rainfall amounts averaged from 3 to 5 inches with many localized areas over 7 inches in only a few hours. The hardest hit area was the Birmingham Metropolitan area where the damage stretched from Bessemer to Pelham to Mountain Brook to Vestavia Hills. The following events were reported: numerous high water rescues were performed by area fire departments, one junior high school sustained major damage, one home was totally destroyed, 100 homes suffered varying degrees of damage, 22 apartments were flooded, one bowling alley sustained major damage, at least 20 businesses were damaged, a few bridges were washed out, a few culvert pipes were washed away, trees and power lines fell down due to the saturated ground, numerous roads were temporarily closed and impassable, and over 200 automobiles suffered significant damage in Vestavia Hills. No injuries were reported.

Some 24 hour rainfall totals in inches (most of which fell in two to four hours);

|                  |       |
|------------------|-------|
| Logan Martin Dam | 10.96 |
| Vincent          | 8.19  |
| Mitchell Dam     | 7.64  |
| Wilsonville      | 7.75  |
| Alabaster        | 5.60  |
| Childersburg     | 5.05  |
| Palmerdale       | 5.03  |
| Helena           | 4.71  |
| Calera           | 4.67  |
| Pinson           | 4.50  |

## **ALZ001-003-006-009-024    Lauderdale - Franklin - Madison - Jackson - Jefferson**

|           |                |          |          |            |          |                        |
|-----------|----------------|----------|----------|------------|----------|------------------------|
| <b>26</b> | <b>1500CST</b> | <b>0</b> | <b>0</b> | <b>27K</b> | <b>0</b> | <b>High Wind (G40)</b> |
|-----------|----------------|----------|----------|------------|----------|------------------------|

Tropical Storm Isidore moved inland along the Louisiana Coast during the early morning hours. The large scope of this storm affected areas in north and central Alabama. Total rainfall amounts averaged from 3 to 5 inches. No significant flooding was reported because the rain fell over a long enough period of time. But the ground across the area became saturated. Wind gusts associated with this tropical system ranged from 25 to 50 miles an hour. The higher wind gusts mainly occurred at the higher elevations of north Alabama. The saturated ground conditions, in combination with the wind gusts, knocked several trees down in the mentioned counties. A few power lines also were knocked down leaving many customers temporarily without power.

Some rain totals (in inches) from Isidore;

|                |      |
|----------------|------|
| Wright         | 5.27 |
| Fayette        | 4.30 |
| Russellville   | 4.30 |
| Muscle Shoals  | 4.18 |
| Falkville      | 4.01 |
| Oakland        | 4.00 |
| Alexander City | 4.00 |

Some wind gusts (miles an hour);

|              |    |
|--------------|----|
| Red Mountain | 48 |
| Montgomery   | 38 |
| Huntsville   | 37 |
| Birmingham   | 33 |
| Tuscaloosa   | 31 |

## ALABAMA, North

NOT RECEIVED.

## ALABAMA, Southeast

NONE REPORTED.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## ALABAMA, Southwest

### **Baldwin County**

#### **Ft Morgan**

**01 1400CST 1410CST 1 0 Rip Currents**

A twenty-six year old female was swimming with her daughter in rough water near Gulf Shores Plantation. They were visiting the area from out of state. The pair got caught in a strong rip current and were swept 600 yards west of where they went into the water. The daughter was rescued but the mother drowned in the rough water.  
F26IW

### **Clarke County**

#### **Fulton**

**06 1700CST 1702CST 0 0 4K Thunderstorm Wind (G50)**

Several trees were blown down along State Highway 178 near Fulton. The damage was sporadic and ended where SR 178 crosses U. S Highway 43.

### **ALZ061>064**

#### **Upper Mobile - Upper Baldwin - Lower Mobile - Lower Baldwin**

**12 0900CST 0 0 90K Tropical Storm**  
**14 1200CST**

Tropical Storm Hanna moved across the area during the morning of September 14. The area was put under a Tropical Storm Watch at 900 AM CST on September 12, then a Tropical Storm Warning at 300 AM CST on September 13. The warning was dropped at NOON CST on September 14 as the remains of Hanna moved inland across southwest Alabama.

Hanna made landfall near the west end of Dauphin Island around 900 AM CST Saturday morning.

Some of the winds recorded across Southwest Alabama and Northwest Florida were as follows: Mobile Regional Airport, sustained winds of 25 knots with gusts to 30 knots. Pensacola Regional Airport, sustained wind of 47 knots with gusts to 57 knots. Pensacola Naval Air Station, sustained wind of 41 knots with gusts to 48 knots. Eglin Air Force Base in Valpariaso, sustained wind of 32 knots with gusts to 41 knots. Hurlburt Air Force Base in Mary Esther, sustained wind of 37 knots with gusts to 54 knots. Dauphin Island, sustained wind of 35 knots with a gust to 44 knots. One of the highest wind speeds was on Pensacola Beach where a sustained wind of 43 knots with a gust of 59 knots was recorded.

The lowest sea level pressures were recorded at Dauphin Island with 1005 MB and at Mobile Regional Airport and Brookley Field with 1006 MB.

The highest two day rainfall totals ending at midnight on September 14 across the area were Coden, AL with 7.55 inches, Belle Fontaine, AL with 5.75, Destin, FL with 5.41 inches and Crestview, FL with 5.04 inches.

The highest storm tides were at Dauphin Island with 3.7 feet and Pensacola with 3.4 feet.

Minor beach erosion occurred from Dauphin Island in Alabama to Navarre Beach in Florida.

Storm tide flooding occurred on the west end of Dauphin Island and in the south part of Mobile county and also along the Causeway that crosses Mobile Bay. Tidal flooding also took place along the Baldwin county beaches and along Pensacola Beach and Navarre Beach in Escambia and Santa Rosa counties in Florida.

### **Baldwin County**

#### **Point Clear**

**14 0720CST 0750CST 0 0 Flash Flood**

Heavy rains caused temporary street flooding around Point Clear. Several roads in the area became impassable and had to be closed for about half an hour. The water quickly drained when the rain stopped.

### **Mobile County**

#### **Theodore to Bayou La Batre**

**14 0735CST 0830CST 0 0 Flash Flood**

Heavy rains caused street flooding between Theodore and Bayou La Batre. Several roads across the south part of Mobile county had to be closed for almost an hour due to the flooded streets. Water quickly drained out of the roads after the rain stopped.

### **Mobile County**

#### **Theodore**

**14 0830CST 0831CST 0.1 20 0 0 8K Tornado (F0)**

A weak tornado briefly touched down near Theodore. Several trees were blown down by the tornado. No injuries were reported.

### **Mobile County**

#### **5 W Mobile Bates Fld**

**22 1408CST 1409CST 0.1 20 0 0 1K Tornado (F0)**

An off duty meteorologist observed a weak tornado just ahead of a squall line that was moving in from the north. The tornado lasted less than a minute and blew down several large tree limbs. He observed the funnel and saw it touchdown before taking cover in his home. No injuries were reported.

### **ALZ061>064**

#### **Upper Mobile - Upper Baldwin - Lower Mobile - Lower Baldwin**

**24 0900CST 0 0 6.5M Tropical Storm**  
**26 1500CST**

For the second time during the month the area was threatened by a tropical storm. Tropical Storm Isidore threatened the area Tuesday, Wednesday and Thursday. We were put under a Tropical Storm Warning at 900 AM CST on September 24. The Tropical Storm Warning was dropped at 300 PM CST on September 26 as the remains of Isidore moved across eastern Mississippi. Isidore moved ashore over the Southeast Louisiana Coast between 200 and 300 AM CST on September 26. Although the center of Isidore did not move over our area, the strongest winds and heaviest rains were east of the center with most of the damage across

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## ALABAMA, Southwest

Southwest Alabama and Northwest Florida.

Some of the winds recorded across Southwest Alabama and Northwest Florida were as follows: Mobile Airport, sustained wind of 42 knots with gusts to 50 knots. Mobile Brookley Field, sustained wind of 40 knots with gusts to 50 knots. Dauphin Island, sustained wind of 42 knots with gusts to 52 knots. Cedar Point, sustained wind of 35 knots with gusts to 53 knots. Pensacola Airport, sustained wind of 29 knots with gusts to 44 knots. Pensacola Naval Air Station, sustained wind of 31 knots with gusts to 43 knots. Hurlburt Air Force Base in Mary Esther, sustained wind of 33 knots with gusts to 49 knots. Pensacola Beach, sustained wind of 40 knots with gusts to 58 knots. Perdido Key, sustained wind 37 knots with gusts to 53 knots.

The lowest sea level pressure was 991 MB at Mobile Airport, Dauphin Island and Semmes, Alabama.

Two day rainfall totals across the area ending at 1100 AM CST on September 26 were as follows in Alabama: Robertsedale 11.76, Semmes 11.90, Bay Minette 11.00, Mobile (4 S of MOB) 11.00, Brewton 10.29, Gulf State Park 10.20 and Mobile (Municipal Park) 10.12. In Florida: Milton 15.72, Pace 13.76, Bratt 10.27, Munson 10.14, Pensacola Airport 9.09, Pea Ridge 8.74 and Milligan 8.27. In Mississippi: Wiggins 9.80, Merrill 9.19, Leakesville and Waynesboro 7.15.

The highest storm tides along the Alabama coast were as follows: Middle Bay Light House 6.1 feet, Mobile State Docks 5.9 feet, Cedar Point 5.0 feet, and Dauphin Island 4.4 feet. Along the Florida coast, some storm tides were as follows: Pensacola 5.2 feet, Perdido Pass 4.5 feet, Destin East Pass 3.8 feet, and Santa Rosa Sound 3.4 feet.

Major beach erosion occurred on Dauphin Island and along the beaches of Baldwin county in Alabama, as well as along the Florida panhandle coastline from Pensacola Beach to Navarre Beach.

Major storm tide flooding occurred in Mobile County Alabama on the west end of Dauphin Island, along low lying coastal areas of the southern part of the county, and along the Causeway that crosses the northern part of Mobile Bay. Storm tide flooding also occurred in Baldwin County, primarily in the West Beach and Orange Beach areas. Storm tide flooding also occurred along portions of the Florida coastline from Pensacola Beach to Navarre Beach. Moderate river flooding occurred in Mobile and Baldwin counties in Alabama, with some river flooding also reported in Escambia, Santa Rosa, and Okaloosa counties of the Florida panhandle.

Two F0 tornadoes occurred in coastal Okaloosa county in Florida, two F0 tornadoes occurred in coastal Baldwin county of Alabama and one F0 In Mobile county. Minor structural damage was reported with each tornado, but for the most part, only tree damage occurred.

Primary storm effects were along the coasts of Alabama and the Florida panhandle. In Mobile county, the main effects were the tidal flooding that occurred on Dauphin Island. The berm on the west end of the island was destroyed. Bayou La Batre and the road leading to Dauphin Island were flooded by above normal tide levels. Two feet of water covered Water Street in downtown Mobile. The causeway at the northern end of Mobile Bay was closed for a time due to high water, and some of the businesses on the causeway were flooded. Some houses along Bayou Sara and the Fowl River had some water in them. In Baldwin County, major beach erosion occurred along an area know as West Beach. Surges in this area were estimated at 5.5 to 6.5 feet. Wind driven waves on top of this surge deposited sand across West Beach Road and the wave action removed a couple of feet of sand from underneath several beach houses. Some houses along the Fish River were also flooded. In Escambia County major beach erosion occurred on Pensacola Beach. The road to Fort Pickens and the road between Pensacola Beach and Navarre Beach was closed due to the road being overwashed with several feet of sand. The island was breached in a couple of places. The Santa Rosa county coast sustained major beach erosion as well...primarily around Navarre Beach. Lastly, Okaloosa county experience some beach erosion, but not as extensively as did the counties just to the west. Highway 98 between Fort Walton and Destin had a couple of feet of water across it, but at least one lane remained open and passable.

### Mobile County

Theodore

|    |                    |   |   |             |
|----|--------------------|---|---|-------------|
| 24 | 1745CST<br>1830CST | 0 | 0 | Flash Flood |
|----|--------------------|---|---|-------------|

Heavy rains caused streets to flood near Theodore. Several of the streets were impassable and had to be closed for about an hour. The water quickly drained from the streets and they were reopened after the rain stopped.

### Mobile County

Theodore to  
Bayou La Batre

|    |                    |   |   |             |
|----|--------------------|---|---|-------------|
| 25 | 0300CST<br>0730CST | 0 | 0 | Flash Flood |
|----|--------------------|---|---|-------------|

Heavy rains fell across the south part of Mobile county and caused several streets to flood. Many of the secondary streets between Theodore and Bayou la Batre had to be closed for several hours due to the heavy rain. The streets were reopened after the rain stopped and the water had time to drain.

### Baldwin County

Foley to  
Gulf Shrs

|    |                    |   |   |       |
|----|--------------------|---|---|-------|
| 25 | 0445CST<br>1200CST | 0 | 0 | Flood |
|----|--------------------|---|---|-------|

Heavy rains caused several streets in the south part of Baldwin county to flood. Most of the secondary streets in the south part of the county had standing water in them and had to be closed for several hours. Most of the water drained out of the streets in the early afternoon as the heavy rains subsided.

### Baldwin County

Gulf Shrs

|    |                    |     |    |   |   |     |              |
|----|--------------------|-----|----|---|---|-----|--------------|
| 25 | 1825CST<br>1827CST | 0.1 | 20 | 0 | 0 | 25K | Tornado (F0) |
|----|--------------------|-----|----|---|---|-----|--------------|

A weak tornado moved across part of Gulf State Park. The tornado was spawned from a storm that moved in from the Gulf of Mexico. The weak tornado flipped a couple of trailers and also blew down trees and power lines in the Park. No injuries were reported.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## ALABAMA, Southwest

### **Baldwin County**

**Gulf Shrs**      25      1906CST  
1907CST      0.1      20      0      0      15K      **Tornado (F0)**

A weak tornado damaged a building near the Gulf of Mexico in Gulf Shores. The storm that spawned the tornado moved in from the Gulf. The building suffered minor roof damage and several windows were blown out.

### **Baldwin County**

**South Portion**      25      2140CST  
26      1500CST      0      0      **Flood**

Heavy rains associated with Tropical Storm Isidore again caused many streets to flood in the south part of the county. Numerous secondary roads had to be closed for several hours due to high water.

### **Mobile County**

**South Portion**      25      2140CST  
26      1500CST      0      0      **Flood**

Heavy rains from Tropical Storm Isidore again caused flooding across the south part of the county. Many streets were closed for hours due to high water.

### **Escambia County**

**Atmore**      26      0205CST  
0600CST      0      0      **Flash Flood**

Heavy rains as a result of Tropical Storm Isidore caused several streets to have standing water in them in Atmore. Many secondary roads had to be closed for several hours due to the high water.

### **Mobile County**

**Semmes**      26      0530CST  
0532CST      0.1      20      0      0      5K      **Tornado (F0)**

A weak tornado blew down several trees and caused some minor roof damage to a home near Semmes. The rapidly moving tornado also damaged a couple of outbuildings near the same location.

## ALASKA, Northern

### **AKZ223-225>226**

#### **Deltana And Tanana - Denali - Ne. Slopes Of The Ern Ak Rng**

12      0900AST      0      0      **High Wind (G48) <sup>M</sup>**  
14      0051AST

A low pressure center moved from Bristol Bay north over the Kuskokwim Delta and caused strong winds to occur over the Alaska Range and nearby areas, including Delta Junction.

High Winds reported:

Zone 223: Delta Junction ASOS reported the highest gust as 55 mph.

Zone 225: Amateur Radio operator reported 47 Knots (54 mph).

Zone 226: Pilot Report of 50 knots near Donnelly Dome at 2200 feet above the ground; estimated surface wind was near 50 mph. Another Pilot report at 2500 feet above the ground noted wind speed to 55 knots out of the pass. Another pilot reported at 1500 feet above the ground at the northwest corner of zone 226, wind speeds of 50 knots.

### **AKZ225>226**

#### **Denali - Ne. Slopes Of The Ern Ak Rng**

26      1000AST      0      0      **High Wind (G45)**  
1800AST

The occlusion from a strong low over the Bering Sea moved northeast toward the Alaska Range and brought a period of strong winds to this region. Winds were estimated at 50 to 55 mph due to wind profiler readings from Talkeetna, south of zone 225, and from a pilot report in zone 226 which said winds were 55 knots at 2700 feet above the ground.

## ALASKA, Southeast

NONE REPORTED.

## ALASKA, Southern

### **AKZ191**

#### **Western Aleutians**

11      0000AST      0      0      **High Wind (G56)**  
2200AST

A small 986 mb frontal low moved northeast into the Bering Sea Wednesday morning from its position just west southwest of Adak. Winds were estimated at between 55 and 65 mph in the data poor area west of Adak on the 'back side' of the low.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## ALASKA, Southern

### AKZ101

#### Anchorage Muni To Bird Creek

12 0900AST 0 0 4K High Wind (G60) <sup>M</sup>  
2359AST

Complex lows over western Alaska, combined with a moderate high pressure ridge extending from the Gulf of Alaska into south-central Alaska, produced gusty southeast winds through Turnagain Arm and along much of the upper Anchorage hillside. Gusts reached 69 mph at Glen Alps between 11 am and noon Thursday and again at 2 am Friday. A report from a Forest Service site at the old Nike base above Alpenglowl recorded a peak wind of 97 mph between 11 am Thursday and midnight. The accuracy of this report could not be confirmed.

Anchorage police reported some roof damage to a house in Muldoon. KNIK radio station (the Breeze) was off the air for 3 hours Thursday night...a result of a tree that blew into a power line connected to their tower in Eagle River. Matanuska Electric Association reported 2 other instances of outages from trees being blown into power lines.

Chugach Electric reported 18 instances of trees downing power lines in the Anchorage bowl. Most problems were in Chester Valley and along the southeast part of Anchorage.

### Bristol Bay Countywide

12 1300AST 0 0 2K Storm Surge  
13 1300AST

### Kuskokwim Delta Countywide

12 1300AST 0 0 1K Storm Surge  
13 1300AST

A significant Bering Sea storm moved into Norton Sound Thursday night. Strong southerly winds preceded the associated front, while strong westerly winds were observed along the 'back side' of the low.

Strong onshore winds combined with maximum astronomical tides to produce the potential for coastal flooding as early as Thursday afternoon. The coastal flood threat continued into Friday morning.

According to a report from Togiak on 9/13, at 4:05 pm ADT, 1 boat washed out to the beach (caused by the wind). The boat's anchor snapped Thursday morning. According to the NWS office in King Salmon, the Village Public Safety Officer (VPSO) in the community estimated "tide...10 ft above normal". It appeared that most significant water encroachment as on the "morning (Friday) tide".

In Dillingham, officials suggested that the coastal flood was a minimal one ("very mild") and that they did not sustain any damage. The high tide and wind during the morning Thursday, and the next late Thursday afternoon, were mentioned as periods of concern.

At Napakiak, one commercial fishing net was lost and the river reportedly overflowed its banks by 2-3 feet.

Southerly winds across the area were gusting from 35 mph to locally near 55 mph Thursday. Strongest winds were reported at Cape Newenham, at the western juncture of the Bristol Bay and Kuskokwim Delta zone.

### AKZ185-191-195

#### Eastern Aleutians - Western Aleutians - Pribilof Islands

24 1258AST 0 0 High Wind (G72) <sup>M</sup>  
26 1925AST

An strong low moved through the central Aleutians into the Bering Sea with the cold front elongating east Tuesday into Wednesday. The low intensified to 958 mbs. Wednesday before slowly weakening Wednesday night and Thursday. Strong southeast winds were reported in advance of the front. Intense west winds were observed on the southwest semi-circle of the low.

Zone 185--Dutch Harbor airport reported a gust to 61 mph in advance of the front. The winds decreased after frontal passage, then increased to 81 mph from the southwest on the back side of the low. 60+ mph winds were primarily limited to the Dutch Harbor airport area.

Zone 191--Winds at several reporting stations reached 60+ mph by Tuesday afternoon. Winds decreased briefly, following frontal passage early Wednesday, then increased again late Wednesday into early Thursday.

Zone 195--By adjusting 5-second average ASOS wind gusts, it was determined that winds at St. George did reach at least 60 mph from the southeast Wednesday morning in advance of the storm and from the west on the back side of the low late Wednesday into early Thursday.

### AKZ125

#### Wrn P.W. Snd & Kenai Mtns

24 1408AST 0 0 High Wind (G57) <sup>M</sup>  
2053AST

A strong cold front moved through the area preceded by gusty southeast winds that were channeled by terrain.

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002  |           |                                     |                           |                          |                      |          |                     |  |                                     |
|---|-----------|-------------------------------------|---------------------------|--------------------------|----------------------|----------|---------------------|--|-------------------------------------|
| Location  | Date      | Time<br>Local/<br>Standard          | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |          | Estimated<br>Damage |  | Character of Storm                  |
|   |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b><u>ALASKA, Southern</u></b>  |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>AKZ101</b>   |           | <b>Anchorage Muni To Bird Creek</b> |                           |                          |                      |          |                     |  |                                     |
|   | <b>24</b> | <b>1500AST</b>                      |                           |                          | <b>0</b>             | <b>0</b> |                     |  | <b>High Wind (G54) <sup>M</sup></b> |
|   |           | <b>1730AST</b>                      |                           |                          |                      |          |                     |  |                                     |
| A strong front moved east through the area, preceded by locally strong southeast winds.   |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>AKZ101</b>   |           | <b>Anchorage Muni To Bird Creek</b> |                           |                          |                      |          |                     |  |                                     |
|   | <b>25</b> | <b>2300AST</b>                      |                           |                          | <b>0</b>             | <b>0</b> |                     |  | <b>High Wind (G72) <sup>M</sup></b> |
|   | <b>26</b> | <b>1300AST</b>                      |                           |                          |                      |          |                     |  |                                     |
| A strong front moved east through the area, preceded by strong southeast winds. The event was widespread through western Turnagain Arm and Upper Hillside areas.  |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b><u>AMERICAN SAMOA</u></b>  |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Tutuila</b>  |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Countywide</b>   |           | <b>16</b>                           | <b>0600SST</b>            |                          | <b>0</b>             | <b>0</b> |                     |  | <b>Rip Currents</b>                 |
|   |           | <b>17</b>                           | <b>1500SST</b>            |                          |                      |          |                     |  |                                     |
| <b>ASZ002</b>   |           | <b>Tutuila</b>                      |                           |                          |                      |          |                     |  |                                     |
|   | <b>26</b> | <b>1600SST</b>                      |                           |                          | <b>0</b>             | <b>0</b> |                     |  | <b>Wind Advisory</b>                |
|   | <b>30</b> | <b>0800SST</b>                      |                           |                          |                      |          |                     |  |                                     |
| An intense high pressure area far south of Samoa coupled with a trough of low pressure just to the north of the islands generated strong trades with winds occasionally gusting to the mid to upper 30s. These winds caused many small fishing boats to stay in port. Though now direct damages affect the public a lot of fishermem complained of poor fishing conditions. |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b><u>ARIZONA, Central and Northeast</u></b>  |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Navajo County</b>  |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Cow Spgs</b>   |           | <b>06</b>                           | <b>1615MST</b>            |                          | <b>0</b>             | <b>0</b> |                     |  | <b>Urban/Sml Stream Fld</b>         |
| Department of Public Saftey reported mud and debris flowing across Highway 160 near Cow Springs.  |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Coconino County</b>  |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Leupp</b>  |           | <b>07</b>                           | <b>1115MST</b>            |                          | <b>0</b>             | <b>0</b> |                     |  | <b>Thunderstorm Wind (G50)</b>      |
|   |           |                                     | <b>1130MST</b>            |                          |                      |          |                     |  |                                     |
| Strong wind tore the awning off of a camper in Leupp. The wind was estimated at 50 to 60 MPH.   |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Coconino County</b>  |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Munds Park</b>   |           | <b>07</b>                           | <b>1844MST</b>            |                          | <b>0</b>             | <b>0</b> |                     |  | <b>Urban/Sml Stream Fld</b>         |
| <b>Yavapai County</b>   |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Rimrock to Cordes</b>  |           | <b>07</b>                           | <b>1844MST</b>            |                          | <b>0</b>             | <b>0</b> |                     |  | <b>Urban/Sml Stream Fld</b>         |
| Street flooding and water damage to homes was reported in Munds Park. DPS reported several cars slid off I-17 between Cordes Junction and Camp Verde due to the wet road conditions. Street flooding was also reported in the community of Rimrock.   |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Yavapai County</b>   |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Paulden</b>  |           | <b>07</b>                           | <b>2300MST</b>            |                          | <b>0</b>             | <b>0</b> |                     |  | <b>Urban/Sml Stream Fld</b>         |
|   |           | <b>08</b>                           | <b>0100MST</b>            |                          |                      |          |                     |  |                                     |
| The Prescott Sheriff Office reported that washes were flowing in the Paulden area. The flooding washed at least one car off a dirt road.  |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Yavapai County</b>   |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Chino Vly</b>  |           | <b>10</b>                           | <b>1156MST</b>            |                          | <b>0</b>             | <b>0</b> |                     |  | <b>Hail (0.75)</b>                  |
| A spotter in Chino Valley reported 3/4 inch hail.   |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Yavapai County</b>   |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Chino Vly</b>  |           | <b>10</b>                           | <b>1250MST</b>            |                          | <b>0</b>             | <b>0</b> |                     |  | <b>Heavy Rain</b>                   |
|   |           |                                     | <b>1350MST</b>            |                          |                      |          |                     |  |                                     |
| A spotter in Chino Valley reported 1.12 inches of rain in just one hour.  |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Apache County</b>  |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Cornfield</b>  |           | <b>10</b>                           | <b>1300MST</b>            |                          | <b>0</b>             | <b>0</b> |                     |  | <b>Flash Flood</b>                  |
|   |           |                                     | <b>1400MST</b>            |                          |                      |          |                     |  |                                     |
| Arizona DOT reported flooding over Indian Route 15 in four places between Cornfield and Burnside. Pooling of water was reported in flat places on State Highway 191 and on State Route 264 between milepost 440 and 441.  |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Apache County</b>  |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Rough Rock</b>   |           | <b>10</b>                           | <b>1335MST</b>            |                          | <b>0</b>             | <b>0</b> |                     |  | <b>Flash Flood</b>                  |
|   |           |                                     | <b>1435MST</b>            |                          |                      |          |                     |  |                                     |
| Flooding made Indian Route 59 near Rough Rock impassible.   |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Coconino County</b>  |           |                                     |                           |                          |                      |          |                     |  |                                     |
| <b>Cosnino to Flagstaff</b>   |           | <b>10</b>                           | <b>1438MST</b>            |                          | <b>0</b>             | <b>0</b> |                     |  | <b>Hail (2.00)</b>                  |
|   |           |                                     | <b>1450MST</b>            |                          |                      |          |                     |  |                                     |
| Two inch hail fell in Doney Park and Cosnino as a severe thunderstorm moved five miles west of Flagstaff. Penny sized (3/4 inch) hail was reported at milepost 207on I-40 (near Cosnino).   |           |                                     |                           |                          |                      |          |                     |  |                                     |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location   | Date     | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm   |
|--|----------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|----------------------|
|  |          |                            |                           |                          | Killed               | Injured | Property            | Crops |                      |
| <b>ARIZONA, Central and Northeast</b>  |          |                            |                           |                          |                      |         |                     |       |                      |
| <b>Navajo County</b>   |          |                            |                           |                          |                      |         |                     |       |                      |
| Cibecue  | 10       | 1500MST<br>1810MST         |                           |                          | 0                    | 0       |                     |       | Flash Flood          |
| Cibecue Creek was up 7 feet in town. Side washes were also flooding in town. Water entered two homes. Indian Route 12 was flooded at milepost 10. By 5:45 PM, the water began receding. By 6:10 PM, the water was down to 2-3 feet in the Cibecue Creek and the road re-opened.  |          |                            |                           |                          |                      |         |                     |       |                      |
| <b>Gila County</b>   |          |                            |                           |                          |                      |         |                     |       |                      |
| Pine   | 10       | 1605MST<br>1610MST         |                           |                          | 0                    | 0       |                     |       | Hail (0.75)          |
| A spotter in Pine reported 3/4 inch hail for 5 minutes.  |          |                            |                           |                          |                      |         |                     |       |                      |
| <b>Gila County</b>   |          |                            |                           |                          |                      |         |                     |       |                      |
| Pine   | 10       | 1624MST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)          |
| A second storm in Pine produced pea sized to 3/4 inch hail.  |          |                            |                           |                          |                      |         |                     |       |                      |
| <b>Coconino County</b>   |          |                            |                           |                          |                      |         |                     |       |                      |
| Tuba City  | 10<br>11 | 1649MST<br>0415MST         |                           |                          | 0                    | 0       |                     |       | Flash Flood          |
| Heavy rain caused street and house flooding in Tuba City. Extensive flooding was reported in 30 to 40 homes. Indian Route 618 and Blue Ridge Road had several washouts that stranded people. A funnel cloud was also reported in the area. Heavy rain continued into the early morning hours of September 11. Some paved roads washed out with deep gullies carved in some dirt roads. Earthen dams were close to failure and pumps were being used to decrease that danger. |          |                            |                           |                          |                      |         |                     |       |                      |
| <b>Yavapai County</b>  |          |                            |                           |                          |                      |         |                     |       |                      |
| Paulden  | 10       | 1650MST                    |                           |                          | 0                    | 0       |                     |       | Funnel Cloud         |
| A funnel cloud was seen southeast of Paulden.  |          |                            |                           |                          |                      |         |                     |       |                      |
| <b>Apache County</b>   |          |                            |                           |                          |                      |         |                     |       |                      |
| St Johns   | 10       | 1700MST<br>1730MST         |                           |                          | 0                    | 0       |                     |       | Flash Flood          |
| Highway 61 flooded near St Johns.  |          |                            |                           |                          |                      |         |                     |       |                      |
| <b>Apache County</b>   |          |                            |                           |                          |                      |         |                     |       |                      |
| St Johns   | 10       | 1706MST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.75)          |
| Apache County Sheriffs reported 1.75 inch (golf ball) hail in St Johns.  |          |                            |                           |                          |                      |         |                     |       |                      |
| <b>Gila County</b>   |          |                            |                           |                          |                      |         |                     |       |                      |
| Payson   | 10       | 1710MST<br>1745MST         |                           |                          | 0                    | 0       |                     |       | Heavy Rain           |
| Heavy rain fell in Verde Glen between 5:10 PM and 5:45 PM MST. This caused the East Verde River to rise rapidly. The low water crossing at Cowan Ranch was impassable.   |          |                            |                           |                          |                      |         |                     |       |                      |
| <b>Navajo County</b>   |          |                            |                           |                          |                      |         |                     |       |                      |
| Holbrook   | 10       | 1730MST<br>2045MST         |                           |                          | 0                    | 0       |                     |       | Flash Flood          |
| Heavy rain caused flash flooding in the Leroux Wash that covered 1-40 three miles west of Holbrook.  |          |                            |                           |                          |                      |         |                     |       |                      |
| <b>Coconino County</b>   |          |                            |                           |                          |                      |         |                     |       |                      |
| Williams   | 10       | 1744MST                    |                           |                          | 0                    | 0       |                     |       | Funnel Cloud         |
| An off duty NWS employee reported a funnel cloud four miles east of Williams.  |          |                            |                           |                          |                      |         |                     |       |                      |
| <b>Gila County</b>   |          |                            |                           |                          |                      |         |                     |       |                      |
| Payson   | 10       | 1945MST<br>2015MST         |                           |                          | 0                    | 0       |                     |       | Urban/Sml Stream Fld |
| Several streets flooded in Payson. Highway 87 flooded at the East Verde River.   |          |                            |                           |                          |                      |         |                     |       |                      |
| <b>Apache County</b>   |          |                            |                           |                          |                      |         |                     |       |                      |
| Chinle   | 10       | 1945MST<br>2300MST         |                           |                          | 0                    | 0       |                     |       | Flash Flood          |
| The Chinle Police Department reported flooding along the Chinle Wash from the confluence of the Canyon de Chelly Wash northward to Rock Point. People were evacuated as flood waters threatened homes along the Chinle Wash. One mobile home was washed off its foundations. Additional flooding was reported over the bridge on Nazlini Creek near Chinle.  |          |                            |                           |                          |                      |         |                     |       |                      |
| <b>Coconino County</b>   |          |                            |                           |                          |                      |         |                     |       |                      |
| Mormon Lake  | 18       | 1130MST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)          |
| One inch hail was reported in Forest Lakes (40 Miles southeast of Mormon Lake).  |          |                            |                           |                          |                      |         |                     |       |                      |
| <b>Navajo County</b>   |          |                            |                           |                          |                      |         |                     |       |                      |
| Cow Spgs   | 18       | 1130MST<br>1140MST         |                           |                          | 0                    | 0       |                     |       | Hail (1.00)          |
| Quarter sized (one inch) hail was reported on Highway 160 between Cow Springs and Kayenta.   |          |                            |                           |                          |                      |         |                     |       |                      |

# Storm Data and Unusual Weather Phenomena

September 2002

|  |      |                            |                           |                          |                      |   |                     |   | September 2002                       |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|---|--------------------------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |   | Character of Storm                   |
|  |      |                            |                           |                          |                      |   |                     |   |                                      |
| <b><u>ARIZONA, Central and Northeast</u></b>   |      |                            |                           |                          |                      |   |                     |   |                                      |
| <b>Apache County</b>   |      |                            |                           |                          |                      |   |                     |   |                                      |
| St Johns   | 18   | 1230MST<br>1730MST         |                           |                          | 0                    | 0 |                     |   | Flash Flood                          |
| <b>Navajo County</b>   |      |                            |                           |                          |                      |   |                     |   |                                      |
| Snowflake  | 18   | 1230MST<br>1730MST         |                           |                          | 0                    | 0 |                     |   | Flash Flood                          |
| Heavy rain caused steet flooding and road closures in St Johns and Snowflake. Route 77 to Snowflake was closed due to flooding. Flooding was also reported on Route 191 near St Johns.   |      |                            |                           |                          |                      |   |                     |   |                                      |
| <b>AZZ008</b>  |      |                            |                           |                          |                      |   |                     |   |                                      |
| <b>Yavapai County Mountains</b>  |      |                            |                           |                          |                      |   |                     |   |                                      |
|  | 27   | 1100MST<br>1230MST         |                           |                          | 0                    | 0 |                     |   | High Wind (G45)                      |
| Strong wind interrupted power in Prescott and Dewey. Power poles may have been knocked down.   |      |                            |                           |                          |                      |   |                     |   |                                      |
| <b><u>ARIZONA, Northwest</u></b>   |      |                            |                           |                          |                      |   |                     |   |                                      |
| <b>Mohave County</b>   |      |                            |                           |                          |                      |   |                     |   |                                      |
| Kingman Arpt   | 10   | 1609PST<br>1709PST         |                           |                          | 0                    | 0 | 2K                  |   | Heavy Rain                           |
| The Kingman ASOS recorded 0.85 inches of rain in an hour. This caused several large puddles to form around the airport. A dirt road in the vicinity of the airport was damaged due to the excessive run-off.   |      |                            |                           |                          |                      |   |                     |   |                                      |
| <b><u>ARIZONA, South</u></b>   |      |                            |                           |                          |                      |   |                     |   |                                      |
| <b>Pima County</b>   |      |                            |                           |                          |                      |   |                     |   |                                      |
| Tuscon Ryan Fld Arpt   | 06   | 1330MST<br>1340MST         |                           |                          | 0                    | 0 | 0                   | 0 | Thunderstorm Wind (G80) <sup>M</sup> |
| <b>Pima County</b>   |      |                            |                           |                          |                      |   |                     |   |                                      |
| Tuscon Ryan Fld Arpt   | 06   | 1440MST<br>1600MST         |                           |                          | 0                    | 0 | 0                   | 0 | Flash Flood                          |
| Severe thunderstorms developed early in the afternoon over Ryan Field Airport and produced strong winds and heavy precipitation. A peak wind gust of 80 mph was recorded at Ryan Field Airport. However, there was no damage reported. The storm also produced heavy rain which caused Valencia road to be barricaded due to the road flooding. Officials at Ryan Field Airport reported an inch of precipitation in 30 minutes. Also, a gage located 4 miles southeast of Ryan Air Field recorded 1.26 inches of precipitation for the entire event.  |      |                            |                           |                          |                      |   |                     |   |                                      |
| <b>AZZ029</b>  |      |                            |                           |                          |                      |   |                     |   |                                      |
| <b>Southeast Pinal County</b>  |      |                            |                           |                          |                      |   |                     |   |                                      |
|  | 06   | 1430MST<br>1500MST         |                           |                          | 0                    | 0 | 0                   | 0 | Dust Storm                           |
| Strong winds from a severe thunderstorm over Ryan Air Field and other storms nearby induced a dust storm along Interstate 10 between Tucson and Casa Grande. Police dispatch reported near zero viabilities along Interstate 10 for a brief period.  |      |                            |                           |                          |                      |   |                     |   |                                      |
| <b>Pima County</b>   |      |                            |                           |                          |                      |   |                     |   |                                      |
| Tucson   | 06   | 1640MST<br>1800MST         |                           |                          | 0                    | 0 | 0                   | 0 | Flash Flood                          |
| <b>Pima County</b>   |      |                            |                           |                          |                      |   |                     |   |                                      |
| Tucson   | 06   | 1645MST<br>1700MST         |                           |                          | 0                    | 0 | 20K                 | 0 | Thunderstorm Wind                    |
| A severe thunderstorm moved over Tucson producing damaging winds and flash flooding. Strong winds knocked down a line of power poles along Kolb Street between 22nd Street and Speedway. Winds also toppled a 100 foot eucalyptus tree onto a house located on East Broadway and Kolb Street. Along with damaging winds, this storm also produced heavy precipitation. Rainfall amounts ranged from near an inch at several gages in central Tucson to .20 inches on the northeast and northwest portions of the city. Most of the precipitation fell within the first 30 minutes of the event. Tucson International Airport also recorded .66 inches of precipitation for the entire event. Tucson dispatch reported several streets flooded. |      |                            |                           |                          |                      |   |                     |   |                                      |
| <b>Pima County</b>   |      |                            |                           |                          |                      |   |                     |   |                                      |
| Green Vly  | 06   | 1915MST<br>2200MST         |                           |                          | 0                    | 0 | 0                   | 0 | Flash Flood                          |
| Strong thunderstorms developed across southeast Arizona on the afternoon and late evening of the 6th. Several storms continued to develop and move over the town of Green Valley, where law enforcement reported widespread street flooding. A gage at Continental Road in Green Valley recorded 1.85 inches for the entire event. Another gage, located in Madera Canyon, recorded 1.69 inches of precipitation.  |      |                            |                           |                          |                      |   |                     |   |                                      |
| <b>Cochise County</b>  |      |                            |                           |                          |                      |   |                     |   |                                      |
| Douglas  | 07   | 1815MST<br>1820MST         |                           |                          | 0                    | 0 | 0                   | 0 | Hail (1.00)                          |
| <b>Cochise County</b>  |      |                            |                           |                          |                      |   |                     |   |                                      |
| Douglas  | 07   | 1835MST<br>1930MST         |                           |                          | 0                    | 0 | 0                   | 0 | Flash Flood                          |
| A severe thunderstorm moved northeast over the town of Douglas producing hail and flash flooding. A spotter reported 1 inch  |      |                            |                           |                          |                      |   |                     |   |                                      |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## ARIZONA, South

### Pima County

#### Green Vly

diameter hail size and 1.5 inches of rain in 30 minutes. Bisbee dispatch also reported widespread flooding in the town of Douglas.

**08 1440MST**  
**1530MST** **0 0 0 0 Flash Flood**

Strong thunderstorms developed in the early afternoon and moved east over the town of Green Valley. Although the storm was moving quickly at 15 mph, it had a high rainfall rate. A gage near the area reported .78 inches in 14 minutes, and another reported .64 inches in 11 minutes. Officers in Green Valley reported Sahuarita and Country Club roads were flooded and barricaded.

### Pima County

#### Tucson

**10 1430MST**  
**1530MST** **0 0 0 0 Hail (1.50)**

### Pima County

#### Tucson

**10 1445MST**  
**1900MST** **0 0 0 0 Flash Flood**

### Pima County

#### Tucson

**10 1520MST**  
**1525MST** **0 0 64K 0 Thunderstorm Wind (G60) <sup>M</sup>**

### Pima County

#### Marana

**10 1600MST**  
**1630MST** **0 0 0 0 Hail (1.00)**

A severe thunderstorm developed over the greater Tucson area producing damaging winds, hail, and flash flooding. Hail size ranged from 1.5 inches in diameter at the University of Arizona to one inch in diameter across Tucson and Marana. A spotter in central Tucson recorded a peak wind gust of 60 mph and the ASOS at the Tucson International Airport recorded a peak wind gust of 54 mph. The strong winds also knocked down a power pole which left 2300 customers without power. The winds also overturned a mobile home located on Old Vail Road. There was also widespread flash flooding, with rainfall rates of greater than a half of an inch in 30 minutes. Several roads were closed due to flooding which included Sahuarita, Overton and La Cholla roads at Canada del Oro wash, and Davidson.

### Pima County

#### Sells

**10 2012MST**  
**2025MST** **0 0 0 0 Hail (1.00)**

Severe thunderstorm continued to develop in central Pima County through the late evening. Tohono Nation dispatch reported one inch in diameter size hail at Sells.

## ARIZONA, Southwest

### Maricopa County

#### Glendale

**06 1500MST**  
**1505MST** **0 0 1M Thunderstorm Wind**

Microburst winds damaged or destroyed over 100 homes at the Blue Sky Mobile Estates Park in Glendale. Winds also damaged over 100 vehicles at car dealerships near 51st Avenue. Nearby roofs were damaged and power poles were blown down.

### AZZ028

#### Central Deserts

**06 1523MST** **0 0 Dust Storm**

Dense blowing dust in Florence reduced the visibility to about 50 yards.

### Pinal County

#### 10 E Apache Jct to Apache Jct

**06 1535MST**  
**1546MST** **0 0 20K Thunderstorm Wind (G52)**

Winds blew down about 30 power poles. About 400 students were trapped for several hours due to downed power lines that blocked a road to the school. Roof damage was also reported in Gold Canyon..

Wind speeds were reported to be as high as 60 mph in Apache Junction.

### Pinal County

#### Maricopa

**07 1530MST** **0 0 Thunderstorm Wind (G50)**

Power lines reported down on a house in Maricopa.

### Maricopa County

#### Goodyear to Phoenix

**07 1605MST**  
**1625MST** **0 0 200K Hail (1.75)**

Numerous reports of large hail throughout the West Valley, including Sun City, Peoria, and Phoenix. Winds to over 60 mph damaged homes, blew down power poles and uprooted trees. Streets were flooded in the West Valley as rain totals were as much as 1.85 inches. Arizona Public Service and Salt River Project estimated over 11,000 customers were without power.

### Maricopa County

#### Peoria to 15 N Phoenix

**07 1615MST**  
**1625MST** **0 0 Funnel Cloud**

Funnel cloud spotted in parts of Peoria, Glendale and north Phoenix..

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## ARIZONA, Southwest

### **La Paz County**

**10 SE Salome**      **07**      **1535MST**                **0**      **0**           **20K**      **Hail (1.00)**  
Watermelon crop damaged.

### **Pinal County**

**6 W Stanfield**      **10**      **1720MST**                **0**      **0**           **Hail (0.75)**

### **Yuma County**

**Yuma**      **10**      **1720MST**                **0**      **0**      **15K**      **Thunderstorm Wind (G55)**  
Winds damaged a trailer in Yuma, and blew down a transmitter tower at radio station KAWC. Dense blowing dust also accompanied the storm with visibilities less than a quarter mile.

### **Maricopa County**

**25 S Phoenix**      **10**      **1747MST**                **0**      **0**           **Funnel Cloud**  
Private pilot sighted brief funnel cloud.

### **Maricopa County**

**Laveen**      **10**      **1839MST**                **0**      **0**           **Hail (0.88)**

### **Pinal County**

**6 W Stanfield**      **10**      **1930MST**                **0**      **0**           **Hail (1.00)**

## ARKANSAS, Central and North Central

### **Lincoln County**

**Star City**      **06**      **1800CST**                **0**      **0**           **Thunderstorm Wind (G50)**  
Thunderstorm winds downed a few trees and power lines. Some minor roof damage also occurred to the local high school in Star City.

## ARKANSAS, East

### **Lawrence County**

**Hoxie**      **19**      **1200CST**  
**1500CST**                **0**      **0**      **1K**      **Urban/Sml Stream Fld**  
One classroom at an elementary school was flooded.

### **Mississippi County**

**Osceola**      **19**      **1420CST**  
**1425CST**                **0**      **0**      **10K**      **Thunderstorm Wind**  
Six power poles and some trees were blown down.

### **Phillips County**

**Barton**      **19**      **1500CST**  
**1505CST**                **0**      **0**      **25K**      **Thunderstorm Wind**  
Several mobile homes were damaged. Some trees were knocked down.

## ARKANSAS, Northwest

### **Sebastian County**

**Ft Smith**      **19**      **0850CST**                **0**      **0**      **5K**      **Thunderstorm Wind (G61)**  
Thunderstorm winds estimated at 70 miles an hour blew down several trees and knocked power lines down. Up to 6300 residences in Fort Smith lost power.

### **Crawford County**

**Mulberry**      **19**      **0920CST**                **0**      **0**           **Thunderstorm Wind (G61)**  
Thunderstorm winds estimated at 70 miles an hour blew down a few trees.

### **Franklin County**

**10 W Ozark**      **19**      **0920CST**                **0**      **0**           **Thunderstorm Wind (G61)**  
Thunderstorm winds estimated at 70 miles an hour blew down a few trees along Interstate 40 near the Crawford county line.

## ARKANSAS, Southeast

NONE REPORTED.

## ARKANSAS, Southwest

NONE REPORTED.

## CALIFORNIA, Extreme Southeast

NONE REPORTED.

## CALIFORNIA, North Central

NONE REPORTED.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## CALIFORNIA, Northeast

NONE REPORTED.

## CALIFORNIA, Northwest

NONE REPORTED.

## CALIFORNIA, South Central

### Mariposa County

|                      |    |         |  |  |   |   |  |  |                  |
|----------------------|----|---------|--|--|---|---|--|--|------------------|
| 9.5 NNW Yosemite Vlg | 01 | 0000PST |  |  | 0 | 0 |  |  | Wild/Forest Fire |
|                      | 30 | 1800PST |  |  |   |   |  |  |                  |

The Wolf Fire, inside Yosemite National Park, was started on July 11th by lightning and was allowed to burn through the month of August. This resource burn totaled 1454 acres by September 30th (last date of request for spot forecast). No structures or injuries occurred due to this fire.

### Fresno County

|            |    |         |  |  |   |   |  |  |     |
|------------|----|---------|--|--|---|---|--|--|-----|
| Countywide | 01 | 0000PST |  |  | 0 | 0 |  |  | Dry |
|            | 30 | 2359PST |  |  |   |   |  |  |     |

Little adverse weather occurred in September 2002 in Interior Central California. Comment: This past water year in the state of California (July 2001-June 2002) was relatively dry with only about 65% of normal rainfall. In combination with less than normal rainfall the previous water year in the Southern Sierra Nevada Mountains (again only about 65% of normal), antecedent conditions are considerably dry entering this cool season of 2002-2003 for the center part of the state.

## CALIFORNIA, Southeast

### San Bernardino

#### County

|         |    |         |  |  |   |   |  |  |            |
|---------|----|---------|--|--|---|---|--|--|------------|
| Barstow | 06 | 1600PST |  |  | 0 | 0 |  |  | Heavy Rain |
|         |    | 1645PST |  |  |   |   |  |  |            |

A trained storm spotter in Barstow recorded 0.45 inches of rain in 20 minutes. This caused several intersections around town to become flooded and were closed.

## CALIFORNIA, Southwest

### CAZ057

#### Santa Ana Mountains And Foothills

|  |    |         |  |  |   |   |  |  |                |
|--|----|---------|--|--|---|---|--|--|----------------|
|  | 01 | 1000PST |  |  | 1 | 0 |  |  | Excessive Heat |
|  |    | 1700PST |  |  |   |   |  |  |                |

A hiker succumbed to heat exhaustion in Modjeska Canyon. Temperatures in the area were 109 degrees Fahrenheit. M38OU

### Riverside County

|          |    |         |  |  |   |   |     |  |                         |
|----------|----|---------|--|--|---|---|-----|--|-------------------------|
| Murrieta | 01 | 1430PST |  |  | 0 | 0 | 30K |  | Thunderstorm Wind (G60) |
|----------|----|---------|--|--|---|---|-----|--|-------------------------|

Large tree limbs broken off, fences and 2 large water tanks knocked down. Trained spotter in area estimated wind gusts at 60 kt.

### Riverside County

|       |    |         |  |  |   |   |  |  |                         |
|-------|----|---------|--|--|---|---|--|--|-------------------------|
| Hemet | 01 | 1715PST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G52) |
|       |    | 1730PST |  |  |   |   |  |  |                         |

Blowing dust, caused by a downdraft brought visibility to near zero, which in turn resulted in several traffic accidents.

### San Bernardino

#### County

|          |    |         |  |  |   |   |     |  |                         |
|----------|----|---------|--|--|---|---|-----|--|-------------------------|
| Hesperia | 01 | 1735PST |  |  | 0 | 0 | 30K |  | Thunderstorm Wind (G50) |
|          |    | 1736PST |  |  |   |   |     |  |                         |

Power poles blown down near Interstate 15.

### Orange County

|                  |    |         |  |  |   |   |  |  |              |
|------------------|----|---------|--|--|---|---|--|--|--------------|
| Newport Beach to | 03 | 0700PST |  |  | 0 | 0 |  |  | Rip Currents |
| Huntington Beach | 04 | 1700PST |  |  |   |   |  |  |              |

Heavy surf generated by Tropical Cyclone Hernan, caused breakers between 12 and 20 feet and strong rip currents along Orange County beaches.

### CAZ043

#### San Diego County Coasts

|  |    |         |  |  |   |   |  |  |     |
|--|----|---------|--|--|---|---|--|--|-----|
|  | 04 | 0415PST |  |  | 0 | 0 |  |  | Fog |
|  |    | 0700PST |  |  |   |   |  |  |     |

Dense fog developed from Mission Valley to La Jolla.

### Riverside County

|       |    |         |  |  |   |   |  |  |                  |
|-------|----|---------|--|--|---|---|--|--|------------------|
| Norco | 04 | 1300PST |  |  | 0 | 0 |  |  | Wild/Forest Fire |
|       | 05 | 1700PST |  |  |   |   |  |  |                  |

A brush fire in the Santa Ana River bed burned 8 acres and closed Interstate 15 for two hours between Eastvale and Norco. Shifting wind, extremely dry vegetation, and the confined area all hampered fire fighting efforts.

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002  |          |                            |                           |                          |                      |   |                     |          |       |                      |
|---|----------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|----------|-------|----------------------|
| Location  | Date     | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage | Property | Crops | Character of Storm   |
| <b>CALIFORNIA, Southwest</b>  |          |                            |                           |                          |                      |   |                     |          |       |                      |
| <b>San Bernardino County</b>  |          |                            |                           |                          |                      |   |                     |          |       |                      |
| 2.5 N Lytle Creek   | 05<br>06 | 2220PST<br>0700PST         |                           |                          | 0                    | 0 |                     |          |       | Wild/Forest Fire     |
| A one acre brush fire was caused by a burning vehicle.  |          |                            |                           |                          |                      |   |                     |          |       |                      |
| <b>San Diego County</b>   |          |                            |                           |                          |                      |   |                     |          |       |                      |
| 2 E Potrero   | 10       | 1100PST<br>1115PST         |                           |                          | 0                    | 0 |                     |          |       | Hail (1.00)          |
| Near continuous large hail for 15 minutes. Several other occurrences of 0.50 inch diameter hail during the next two hours from additional thunderstorms that formed over the area.  |          |                            |                           |                          |                      |   |                     |          |       |                      |
| <b>San Diego County</b>   |          |                            |                           |                          |                      |   |                     |          |       |                      |
| Campo to Potrero  | 10       | 1208PST<br>1330PST         |                           |                          | 0                    | 0 |                     |          |       | Urban/Sml Stream Fld |
| Rainfall measurements between 0.75 and 1.15 inches in less than an hour. WSR-88D rainfall estimates in remote area located between observations indicated +3 inches/3 hours. Drainage ditches and creeks overflowed 6 foot high banks. Sheet wash, five inches deep, crossed Highway 94 near Mile Marker 9. |          |                            |                           |                          |                      |   |                     |          |       |                      |
| <b>CAZ050 San Diego County Valleys</b>  |          |                            |                           |                          |                      |   |                     |          |       |                      |
|   | 11       | 0645PST<br>0800PST         |                           |                          | 0                    | 0 |                     |          |       | Fog                  |
| Visibility less than 1/4 mile in fog was reported along Mira Mesa Boulevard.  |          |                            |                           |                          |                      |   |                     |          |       |                      |
| <b>Riverside County</b>   |          |                            |                           |                          |                      |   |                     |          |       |                      |
| Beaumont to Moreno Valley   | 11       | 1445PST<br>1915PST         |                           |                          | 0                    | 0 |                     |          |       | Wild/Forest Fire     |
| A brush fire closed Highway 60 between Theodore Street in Moreno Valley and Interstate 10 in Beaumont. In all, 20 acres were burned.  |          |                            |                           |                          |                      |   |                     |          |       |                      |
| <b>San Diego County</b>   |          |                            |                           |                          |                      |   |                     |          |       |                      |
| Camp Pendleton  | 16       | 1007PST<br>1430PST         |                           |                          | 0                    | 0 |                     |          |       | Wild/Forest Fire     |
| A discarded cigarette butt started a brush fire that grew to 247 acres before it was brought under control. Firefighters were able to protect all threatened structures.  |          |                            |                           |                          |                      |   |                     |          |       |                      |
| <b>CAZ050 San Diego County Valleys</b>  |          |                            |                           |                          |                      |   |                     |          |       |                      |
|   | 20       | 0700PST<br>0900PST         |                           |                          | 0                    | 0 |                     |          |       | Fog                  |
| Visibility less than 1/4 mile was reported between Mission Valley and Mira Mesa.  |          |                            |                           |                          |                      |   |                     |          |       |                      |
| <b>CAZ043 San Diego County Coasts</b>   |          |                            |                           |                          |                      |   |                     |          |       |                      |
|   | 23       | 0145PST                    |                           |                          | 0                    | 0 | 250K                |          |       | Fog                  |
| A 44 foot boat trying to enter San Diego Bay in dense fog ran onto the rocks on the eastern side of Point Loma and was destroyed by breaking waves. The three occupants were rescued with no injuries.  |          |                            |                           |                          |                      |   |                     |          |       |                      |
| <b>CALIFORNIA, Upper</b>  |          |                            |                           |                          |                      |   |                     |          |       |                      |
| <b>CAZ084&gt;085 Northeast Siskiyou And Northwest Modoc Counties - Modoc County</b>   |          |                            |                           |                          |                      |   |                     |          |       |                      |
|   | 05<br>06 | 0518PST<br>0800PST         |                           |                          | 0                    | 0 |                     |          |       | Extreme Cold         |
| A Frost Warning was issued for the above zones effective at the above times. Reported low temperatures ranged from 29 to 44, so it appears that this warning verified...with some isolated areas meeting Freeze Warning criteria.   |          |                            |                           |                          |                      |   |                     |          |       |                      |
| <b>CAZ084&gt;085 Northeast Siskiyou And Northwest Modoc Counties - Modoc County</b>   |          |                            |                           |                          |                      |   |                     |          |       |                      |
|   | 06<br>07 | 0445PST<br>0800PST         |                           |                          | 0                    | 0 |                     |          |       | Extreme Cold         |
| A Frost Warning was issued for the above zones effective at the above times. Reported low temperatures ranged from 30 to 39, so it appears that this warning verified...with some isolated areas meeting Freeze Warning criteria.   |          |                            |                           |                          |                      |   |                     |          |       |                      |
| <b>CAZ084&gt;085 Northeast Siskiyou And Northwest Modoc Counties - Modoc County</b>   |          |                            |                           |                          |                      |   |                     |          |       |                      |
|   | 07<br>08 | 0430PST<br>0800PST         |                           |                          | 0                    | 0 |                     |          |       | Extreme Cold         |
| A Frost Warning was issued for the above zones effective at the above times. Reported low temperatures ranged from 25 to 32, so it appears that this warning verified. However, a Freeze Warning was likely the better product to issue in this circumstance.   |          |                            |                           |                          |                      |   |                     |          |       |                      |
| <b>CAZ084&gt;085 Northeast Siskiyou And Northwest Modoc Counties - Modoc County</b>   |          |                            |                           |                          |                      |   |                     |          |       |                      |
|   | 08<br>09 | 0430PST<br>0800PST         |                           |                          | 0                    | 0 |                     |          |       | Extreme Cold         |
| A Frost Warning was issued for the above zones effective at the above times. Reported low temperatures ranged from 27 to 41, so it appears that this warning verified.  |          |                            |                           |                          |                      |   |                     |          |       |                      |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date    | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |  | Estimated<br>Damage | Property | Crops | Character of Storm |
|----------|---------|----------------------------|---------------------------|--------------------------|----------------------|--|---------------------|----------|-------|--------------------|
| Killed   | Injured |                            |                           |                          |                      |  |                     |          |       |                    |

## CALIFORNIA, Upper

CAZ084>085

**Northeast Siskiyou And Northwest Modoc Counties - Modoc County**

09 1330PST

0 0

**Extreme Cold**

10 0800PST

A Frost Warning was issued for the above zones effective at the above times. Reported low temperatures ranged from 32 to 47, so it appears that this warning verified in some locations.

CAZ084>085

**Northeast Siskiyou And Northwest Modoc Counties - Modoc County**

10 1426PST

0 0

**Extreme Cold**

11 0800PST

A Frost Warning was issued for the above zones effective at the above times. Reported low temperatures ranged from 34 to 46, so it appears that this warning did not verify. Frost coverage was likely patchy.

## CALIFORNIA, West South Central

**Los Angeles County**

30 N Azusa

01 1235PST

0 14

12.7M

**Wild/Forest Fire**

12 1800PST

The Curve Fire burned 20,857 acres of land in the Angeles National Forest. The Curve Fire, which was caused by candles from a ritual sacrifice, destroyed 73 structures and injured at least 14 people.

**Los Angeles County**

4 N Castaic

02 0800PST

0 0

**Wild/Forest Fire**

03 1400PST

The Freeway Fire burned over 1,100 acres of land in the Angeles National Forest. The Freeway Fire closed down Interstate 5 for several hours, but no injuries or deaths were reported.

**Los Angeles County**

25 N Azusa

22 0600PST

0 14

15.3M

**Wild/Forest Fire**

30 1800PST

The Williams Fire burned 38,094 acres of land in the Angeles National Forest. This fire, which was located about 25 miles north of Azusa, destroyed 77 structures, including 62 cabins. No reports on the number of possible injuries have been received.

## CALIFORNIA, Western

NONE REPORTED.

## CARIBBEAN SEA AND TROPICAL ATLANTIC

**Deerfield Beach To**

**Ocean Reef Fl 20 To**

**60Nm**

25 E Miami Beach

04 1132EST

0 0

**Waterspout**

A pilot sighted five waterspouts in the Atlantic between Bimini and south Florida.

**Deerfield Beach To**

**Ocean Reef Fl**

8 E Port Everglades

05 0711EST

0 0

**Waterspout**

A pilot saw a waterspout in the Atlantic.

**Jupiter Inlet To**

**Deerfield Beach Fl 20**

**To 60Nm**

20 SE Jupiter Inlet

05 1245EST

0 0

**Waterspout**

A waterspout was seen in the Atlantic offshore Delray Beach.

**Deerfield Beach To**

**Ocean Reef Fl**

17 E Port Everglades

09 0850EST

0 0

**Waterspout**

A pilot sighted a waterspout in the Atlantic.

**Carib Waters E Cst Pr**

**Thru Usvi**

Christiansted Harbor

10 0800AST

0 0

**Waterspout**

0815AST

A spotter sighted a waterspout south of St. Croix moving west at 20 mph.

**Cp Fear To Little R**

**Inlet Nc Out 20Nm**

5 E Shallotte Inlet to

.5 S Shallotte Inlet

14 0610EST

0 0

**Waterspout**

Public report of a waterspout.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## CARIBBEAN SEA AND TROPICAL ATLANTIC

### Deerfield Beach To Ocean Reef Fl

|                 |    |         |  |  |   |   |  |  |            |
|-----------------|----|---------|--|--|---|---|--|--|------------|
| 1 E Miami Beach | 16 | 1145EST |  |  | 0 | 0 |  |  | Waterspout |
|-----------------|----|---------|--|--|---|---|--|--|------------|

The Miami Beach Beach Patrol saw a waterspout just offshore.

### Edisto Beach Sc To Savannah Ga Out 20Nm

|                  |    |                    |  |  |   |   |  |  |            |
|------------------|----|--------------------|--|--|---|---|--|--|------------|
| St. Helena Sound | 19 | 0953EST<br>1000EST |  |  | 0 | 0 |  |  | Waterspout |
|------------------|----|--------------------|--|--|---|---|--|--|------------|

### Carib Waters E Cst Pr Thru Usvi

|         |    |         |  |  |   |   |  |  |            |
|---------|----|---------|--|--|---|---|--|--|------------|
| Vieques | 20 | 1430AST |  |  | 0 | 0 |  |  | Waterspout |
|---------|----|---------|--|--|---|---|--|--|------------|

A spotter from St. John in the Virgin Islands sighted a waterspout south of the St. Thomas moving northwest.

## COLORADO, Central and Northeast

### Elbert County

|                      |    |                    |  |  |   |   |  |  |             |
|----------------------|----|--------------------|--|--|---|---|--|--|-------------|
| East Central Portion | 08 | 1915MST<br>2300MST |  |  | 0 | 0 |  |  | Flash Flood |
|----------------------|----|--------------------|--|--|---|---|--|--|-------------|

Floodwaters washed out two county roads in east central Elbert County. Another roadway, County Road 98, was inundated with nearly 2 feet of water.

### Lincoln County

|                       |    |                    |  |  |   |   |  |  |             |
|-----------------------|----|--------------------|--|--|---|---|--|--|-------------|
| North Central Portion | 08 | 1915MST<br>2300MST |  |  | 0 | 0 |  |  | Flash Flood |
|-----------------------|----|--------------------|--|--|---|---|--|--|-------------|

Very heavy rainfall caused flash flooding across north-central Lincoln County. Several washouts were reported across county roads. A section of State Highway 71 was also flooded. A storm spotter measured up to 5 inches of rainfall in Limon, while media reports indicated up to 9 inches had fallen south of the town. The Limon Public School was closed the following day as 14 inches of standing water was reported in the basement. Classrooms were also flooded with sewer water after floodwaters plugged the pipes.

### Douglas County

|                 |    |         |  |  |   |   |  |  |             |
|-----------------|----|---------|--|--|---|---|--|--|-------------|
| 3 E Castle Rock | 12 | 1434MST |  |  | 0 | 0 |  |  | Hail (1.00) |
|-----------------|----|---------|--|--|---|---|--|--|-------------|

### Elbert County

|            |    |         |  |  |   |   |  |  |             |
|------------|----|---------|--|--|---|---|--|--|-------------|
| 3 W Elbert | 12 | 1530MST |  |  | 0 | 0 |  |  | Hail (1.75) |
|------------|----|---------|--|--|---|---|--|--|-------------|

### Elbert County

|            |    |         |  |  |   |   |  |  |             |
|------------|----|---------|--|--|---|---|--|--|-------------|
| 3 E Elbert | 12 | 1545MST |  |  | 0 | 0 |  |  | Hail (2.00) |
|------------|----|---------|--|--|---|---|--|--|-------------|

Large hail broke a skylight in a home.

### Elbert County

|               |    |         |  |  |   |   |  |  |             |
|---------------|----|---------|--|--|---|---|--|--|-------------|
| 5 S Elizabeth | 12 | 1550MST |  |  | 0 | 0 |  |  | Hail (0.75) |
|---------------|----|---------|--|--|---|---|--|--|-------------|

### Elbert County

|             |    |         |     |    |   |   |   |   |              |
|-------------|----|---------|-----|----|---|---|---|---|--------------|
| 2 NW Elbert | 12 | 1555MST | 0.1 | 50 | 0 | 0 | 0 | 0 | Tornado (F0) |
|-------------|----|---------|-----|----|---|---|---|---|--------------|

A tornado touched down briefly but did no damage.

### Lincoln County

|            |    |         |  |  |   |   |  |  |             |
|------------|----|---------|--|--|---|---|--|--|-------------|
| 4 S Boyero | 12 | 1703MST |  |  | 0 | 0 |  |  | Hail (1.00) |
|------------|----|---------|--|--|---|---|--|--|-------------|

Hail, up to 3 inches deep, covered State Highway 94 south of Boyero. Several drivers lost control of their vehicles and slid into ditches.

### Lincoln County

|            |    |         |  |  |   |   |  |  |             |
|------------|----|---------|--|--|---|---|--|--|-------------|
| 6 S Boyero | 12 | 1735MST |  |  | 0 | 0 |  |  | Hail (1.00) |
|------------|----|---------|--|--|---|---|--|--|-------------|

### Denver County

|        |    |                    |  |  |   |   |  |   |                      |
|--------|----|--------------------|--|--|---|---|--|---|----------------------|
| Denver | 13 | 1430MST<br>1730MST |  |  | 0 | 0 |  | 0 | Urban/Sml Stream Fld |
|--------|----|--------------------|--|--|---|---|--|---|----------------------|

Friday the 13th proved to be bad luck for motorists beneath the Logan Street overpass when rising water inundated their vehicles. Some were rescued, others simply waited atop their vehicles until the water safely receded. The highway had to be closed in both directions for about 3 hours. The deluge also flooded several businesses along Broadway. The incident was the result of brief heavy rainfall coupled with poor drainage, partially attributed to the ongoing T-REX highway project (a 12-ft. drainage pipe had not yet been installed beneath the underpass).

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## COLORADO, Central and Northeast

### **Denver County**

|               |           |                |  |  |          |          |  |          |                             |
|---------------|-----------|----------------|--|--|----------|----------|--|----------|-----------------------------|
| <b>Denver</b> | <b>13</b> | <b>1530MST</b> |  |  | <b>0</b> | <b>0</b> |  | <b>0</b> | <b>Urban/Sml Stream Fld</b> |
|               |           | <b>1630MST</b> |  |  |          |          |  |          |                             |

Friday the 13th proved to be bad luck for several motorists when water rose beneath the Logan Street overpass and inundated several vehicles. The highway was closed in both directions for about 3 hours. A combination of brief heavy rainfall coupled poor drainage, partially attributed to the ongoing T-REX road project (a 12-ft drainage pipe had not yet been installed), led to the incident. Several motorists were stranded atop their vehicles. Some were rescued, others just waited until the water safely subsided. The deluge also flooded several businesses along Broadway.

## COLORADO, East Central

### **Cheyenne County**

|                       |           |                |  |  |          |          |  |  |                    |
|-----------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>5 E Wild Horse</b> | <b>12</b> | <b>1830MST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Hail (0.75)</b> |
|-----------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|

### **Cheyenne County**

|                          |           |                |  |  |          |          |  |  |                    |
|--------------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>17 NNE Kit Carson</b> | <b>12</b> | <b>1905MST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Hail (0.75)</b> |
|--------------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|

## COLORADO, South Central and Southeast

### **El Paso County**

|   |           |                |  |  |          |          |  |  |                    |
|---|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>6 S Colorado Spgs to<br/>Widefield</b> | <b>12</b> | <b>1417MST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Hail (0.75)</b> |
|   |           | <b>1435MST</b> |  |  |          |          |  |  |                    |

### **Kiowa County**

|                   |           |                |  |  |          |          |  |  |                     |
|-------------------|-----------|----------------|--|--|----------|----------|--|--|---------------------|
| <b>10 NW Eads</b> | <b>12</b> | <b>2205MST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Funnel Cloud</b> |
|-------------------|-----------|----------------|--|--|----------|----------|--|--|---------------------|

## COLORADO, West

### **Routt County**

|                               |           |                |  |  |          |          |  |  |                         |
|-------------------------------|-----------|----------------|--|--|----------|----------|--|--|-------------------------|
| <b>23 N Steamboat Spgs to</b> | <b>01</b> | <b>0000MST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Wild/Forest Fire</b> |
| <b>25 N Steamboat Spgs</b>    | <b>14</b> | <b>1600MST</b> |  |  |          |          |  |  |                         |

The Mount Zirkel Complex was comprised of the Burn Ridge and Hinman fires. These were lightning caused fires which began in July and August. This complex was located in the Routt National Forest/Mount Zirkel Wilderness area. The fires consumed 31,016 acres of timber. Favorable weather conditions and precipitation received the first couple weeks of September resulted in minimal fire behavior. The complex was placed in monitor status on the 14th of September at 95 percent containment. The cost of fighting the fires was 13.3 million dollars.

### **Garfield County**

|                              |           |                |  |  |          |          |             |  |                         |
|------------------------------|-----------|----------------|--|--|----------|----------|-------------|--|-------------------------|
| <b>37 N Glenwood Spgs to</b> | <b>01</b> | <b>0000MST</b> |  |  | <b>0</b> | <b>0</b> | <b>500K</b> |  | <b>Wild/Forest Fire</b> |
| <b>41 N Glenwood Spgs</b>    | <b>12</b> | <b>1600MST</b> |  |  |          |          |             |  |                         |

The Big Fish fire began in mid July and was caused by lightning. The fire occurred in the White River National Forest and consumed 17,506 acres of timber, as well as 9 structures. Favorable weather conditions and precipitation received on the fire in early September resulted in minimal fire behavior. The fire was placed in monitor status on September 12th. The cost of fighting the fire was 1.9 million dollars.

### **Rio Blanco County**

|                       |           |                |  |  |          |          |  |  |                         |
|-----------------------|-----------|----------------|--|--|----------|----------|--|--|-------------------------|
| <b>41 E Meeker to</b> | <b>01</b> | <b>0000MST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Wild/Forest Fire</b> |
| <b>42 E Meeker</b>    | <b>11</b> | <b>1600MST</b> |  |  |          |          |  |  |                         |

The Lost Lakes fire began in mid July due to lightning. The fire occurred in the Routt National Forest and consumed 5,538 acres of timber. Favorable weather conditions and precipitation received on the fire in early September resulted in minimal fire behavior. The fire was placed in monitor status on the 11th of September.

## **COZ001>014-017>023**

**Lower Yampa River Basin - Central Yampa River Basin - Roan And Tavaputs Plateaus - Elkhead And Park Mountains - Upper Yampa River Basin - Grand Valley - Debeque To Silt Corridor - Central Colorado River Basin - Grand And Battlement Mesas - Gore And Elk Mountains/Central Mountain Valleys - Central Gunnison And Uncompahgre River Basin - West Elk And Sawatch Mountains - Flattop Mountains - Upper Gunnison River Valley - Uncompahgre Plateau And Dallas Divide - Northwestern San Juan Mountains - Southwestern San Juan Mountains - Paradox Valley / Lower Dolores River Basin - Four Corners / Upper Dolores River Basin - Animas River Basin - San Juan River Basin**

|           |                |          |          |  |  |                |
|-----------|----------------|----------|----------|--|--|----------------|
| <b>01</b> | <b>0000MST</b> | <b>0</b> | <b>0</b> |  |  | <b>Drought</b> |
| <b>30</b> | <b>2359MST</b> |          |          |  |  |                |

The extreme to exceptional drought officially persisted across western Colorado through the month of September. However, periods of rainfall reduced the usage of water across the area, while decreasing the risk of wildfires. See the October 2002 Storm Data publication for a continuation of the drought in western Colorado.

### **Dolores County**

|                        |           |                |  |  |          |          |            |  |                                |
|------------------------|-----------|----------------|--|--|----------|----------|------------|--|--------------------------------|
| <b>4 NW Dove Creek</b> | <b>07</b> | <b>1500MST</b> |  |  | <b>0</b> | <b>0</b> | <b>25K</b> |  | <b>Thunderstorm Wind (G70)</b> |
|                        |           | <b>1510MST</b> |  |  |          |          |            |  |                                |

A large metal cattle feeder was blown several hundred feet and a 7 ton semi stock truck was blown over near the intersection of Highway 666 and County Road 4. A 40 foot wide sliding door on a large building was blown in and several large trees up to 2 feet in diameter were snapped off above the ground.

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002  |      |                            |                           |                          |                      |   |                     |       |                                      |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|-------|--------------------------------------|
| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage | Crops | Character of Storm                   |
| COLORADO, West  |      |                            |                           |                          |                      |   |                     |       |                                      |
| Montezuma County  |      |                            |                           |                          |                      |   |                     |       |                                      |
| Cortez  | 07   | 1600MST<br>1615MST         |                           |                          | 0                    | 0 | 7K                  |       | Thunderstorm Wind (G60)              |
| A trailer roof was blown off and three power lines were downed. Half of the residents of Cortez were without power for over an hour.  |      |                            |                           |                          |                      |   |                     |       |                                      |
| Dolores County  |      |                            |                           |                          |                      |   |                     |       |                                      |
| Dove Creek  | 07   | 1600MST<br>1630MST         |                           |                          | 0                    | 0 | 10K                 |       | Thunderstorm Wind (G61)              |
| A barn was heavily damaged and some trees were blown over and snapped in two. Winds measured at the CSU extension office did not drop below 42 MPH (37 knots) for about 30 minutes.   |      |                            |                           |                          |                      |   |                     |       |                                      |
| Mesa County   |      |                            |                           |                          |                      |   |                     |       |                                      |
| Grand Jct to Orchard Mesa   | 07   | 1615MST<br>1700MST         |                           |                          | 0                    | 0 |                     |       | Urban/Sml Stream Fld                 |
| Heavy rains resulted in extensive street flooding. Some roads were temporarily impassable.  |      |                            |                           |                          |                      |   |                     |       |                                      |
| San Miguel County   |      |                            |                           |                          |                      |   |                     |       |                                      |
| Egnar   | 07   | 1700MST<br>1710MST         |                           |                          | 0                    | 0 |                     |       | Thunderstorm Wind (G56)              |
| La Plata County   |      |                            |                           |                          |                      |   |                     |       |                                      |
| (Dro)Durango/Laplata  | 07   | 1746MST<br>1751MST         |                           |                          | 0                    | 0 |                     |       | Thunderstorm Wind (G58) <sup>M</sup> |
| La Plata County   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 3 N Durango to 10 N Durango   | 07   | 1830MST<br>1930MST         |                           |                          | 0                    | 0 | 1.5M                |       | Flash Flood                          |
| Flash flooding was widespread along the east side of the Animas Valley. Very large debris flows accompanied the flash floods. Two large houses in the path of the flows incurred extensive damage. Two mobile homes were knocked off their foundations. And some sheds were heavily damaged or destroyed. Mud, large trees, and boulders the size of cars covered many sections of county roads and residential properties up to 10 feet deep. A six mile section of irrigation canal was completely filled with debris. 750 people were evacuated from the Bar D Chuckwagon restaurant after being trapped for nearly three hours. |      |                            |                           |                          |                      |   |                     |       |                                      |
| Garfield County   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 2 SE Parachute  | 07   | 1830MST<br>1835MST         |                           |                          | 0                    | 0 |                     |       | Thunderstorm Wind (G53) <sup>M</sup> |
| La Plata County   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 5 NE Durango to 20 NE Durango   | 07   | 1830MST<br>1930MST         |                           |                          | 0                    | 1 | 100K                |       | Flash Flood                          |
| The flash flood brought large volumes of mud, trees, and boulders across county roads and deposited the debris on a number of private properties. Several vehicles were carried a short distance in the flow. One man suffered a heart attack and minor injuries when the vehicle he was driving was washed off the road and into a tree.   |      |                            |                           |                          |                      |   |                     |       |                                      |
| Rio Blanco County   |      |                            |                           |                          |                      |   |                     |       |                                      |
| Meeker  | 07   | 1845MST<br>1850MST         |                           |                          | 0                    | 0 |                     |       | Thunderstorm Wind (G50) <sup>M</sup> |
| Mesa County   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 25 E Grand Jct  | 07   | 1845MST<br>1945MST         |                           |                          | 0                    | 0 |                     |       | Urban/Sml Stream Fld                 |
| One lane of eastbound Interstate 70 near mile marker 58 was closed due to mud flows caused by heavy rain.   |      |                            |                           |                          |                      |   |                     |       |                                      |
| Montrose County   |      |                            |                           |                          |                      |   |                     |       |                                      |
| Olathe  | 07   | 1900MST<br>1905MST         |                           |                          | 0                    | 0 | 2K                  |       | Thunderstorm Wind (G55)              |
| A small greenhouse was destroyed.   |      |                            |                           |                          |                      |   |                     |       |                                      |
| Delta County  |      |                            |                           |                          |                      |   |                     |       |                                      |
| 1 N Hotchkiss   | 07   | 1919MST<br>1925MST         |                           |                          | 0                    | 0 |                     |       | Thunderstorm Wind (G60) <sup>M</sup> |
| Garfield County   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 3 E Rifle   | 07   | 1922MST<br>1927MST         |                           |                          | 0                    | 0 |                     |       | Thunderstorm Wind (G53) <sup>M</sup> |
| Gunnison County   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 11 SW Marble  | 07   | 2150MST<br>2245MST         |                           |                          | 0                    | 0 |                     |       | Urban/Sml Stream Fld                 |
| Rainfall produced runoff and caused rockslides across Highway 133 at mile marker 25 near Paonia Reservoir.  |      |                            |                           |                          |                      |   |                     |       |                                      |
| La Plata County   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 5 NE Durango to 8 N Bayfield  | 10   | 1445MST<br>1530MST         |                           |                          | 0                    | 0 |                     |       | Flash Flood                          |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm   |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|----------------------|
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                      |
| <b>COLORADO, West</b>  |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Montrose County</b>   |      |                            |                           |                          |                      |         |                     |       |                      |
| 2 S Naturita   | 10   | 1500MST<br>1545MST         |                           |                          | 0                    | 0       |                     |       | Urban/Sml Stream Fld |
| Rainfall on the Missionary Ridge burned area caused mud and debris flows across County Road 501 near Vallecito Reservoir. The road was temporarily closed.   |      |                            |                           |                          |                      |         |                     |       |                      |
| Heavy rain resulted in 3 inches of water flowing rapidly across Highway 141 at mile marker 52.   |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Dolores County</b>  |      |                            |                           |                          |                      |         |                     |       |                      |
| 2 NW Dove Creek  | 10   | 1600MST<br>1700MST         |                           |                          | 0                    | 0       |                     |       | Urban/Sml Stream Fld |
| Heavy rains caused 8 inches of water to flow across Highway 141, which deposited 2 to 4 inches of debris on the road.  |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Montezuma County</b>  |      |                            |                           |                          |                      |         |                     |       |                      |
| Lewis to<br>2 ENE Lewis  | 10   | 1600MST<br>1730MST         |                           |                          | 0                    | 0       | 4K                  |       | Flash Flood          |
| Water flowed across and temporarily closed Highway 666 near Lewis. Two sections of County Road X were washed out, as well as a driveway on County Road 23. Water rose to the top of a bridge on County Road W.   |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>San Miguel County</b>   |      |                            |                           |                          |                      |         |                     |       |                      |
| 4 N Placerville  | 10   | 1640MST<br>1730MST         |                           |                          | 0                    | 0       | 2K                  |       | Urban/Sml Stream Fld |
| Heavy rain flooded the basement of a residence.  |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>La Plata County</b>   |      |                            |                           |                          |                      |         |                     |       |                      |
| 5 N Durango to<br>18 NE Durango  | 11   | 0140MST<br>1200MST         |                           |                          | 0                    | 0       | 100K                |       | Flash Flood          |
| A persistent rainfall resulted in 6 to 10 feet of mud and debris flows across sections of County Road 250. Many other county roads in the Missionary Ridge burn area were also closed due to debris and mud flows. Additional damage occurred to personal property.  |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Delta County</b>  |      |                            |                           |                          |                      |         |                     |       |                      |
| 4 W Delta to<br>7 NNW Delta  | 11   | 1605MST<br>1620MST         | 8                         | 60                       | 0                    | 0       | 25K                 |       | Tornado (F1)         |
| The tornado traveled north-northeast across mostly open country and was observed by numerous eyewitnesses in Delta County. The tornado crossed US Highway 50 and proceeded across the west end of Hawkins Field Airport. A house in the northwest area of the airport was struck. The house sustained numerous broken windows and other damage. Many shingles were ripped off the roof, and some became impaled into the siding. Airborne rocks and other debris also became embedded into the siding and interior walls. Furniture inside the house was damaged by flying debris. The railing on the deck was ripped off. A number of items were blown out of the house and a shed adjacent to the house was destroyed. Property from the house and shed were found up to a quarter mile away from the house. |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Delta County</b>  |      |                            |                           |                          |                      |         |                     |       |                      |
| 12 W Delta   | 11   | 1610MST<br>1615MST         |                           |                          | 0                    | 0       |                     |       | Funnel Cloud         |
| This funnel cloud was observed by numerous eyewitnesses over Escalante Canyon. Additionally, eyewitnesses described two funnel clouds in the area around the same period of time. The other funnel cloud was also seen by many eyewitnesses and touched down near Delta. That tornado event is also described in this month's Storm Data publication.  |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Delta County</b>  |      |                            |                           |                          |                      |         |                     |       |                      |
| 2 NW Delta to<br>4 WNW Delta   | 11   | 1730MST<br>1830MST         |                           |                          | 0                    | 0       | 25K                 |       | Flash Flood          |
| Two deep drainages of 20 to 30 feet deep filled up and overflowed US Highway 50 which extends over the drainages. Water 3 feet deep was running across the highway in some locations with nearly 2 feet of debris deposited on the road. Several unoccupied cars and one occupied car were washed off the road. Other noteworthy items which were washed downstream from nearby farms included a boat, a refrigerator, sheds, 50 gallons drums, and a large gas tank. Snow plows and front end loaders were used to clear the debris and open the highway. Flash flood waters several feet deep also ran across County Road 6.5.   |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Garfield County</b>   |      |                            |                           |                          |                      |         |                     |       |                      |
| Silt   | 11   | 1835MST<br>1910MST         |                           |                          | 0                    | 0       |                     |       | Urban/Sml Stream Fld |
| Street flooding occurred in town.  |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Montezuma County</b>  |      |                            |                           |                          |                      |         |                     |       |                      |
| 20 SW Cortez   | 11   | 1850MST<br>1930MST         |                           |                          | 0                    | 0       |                     |       | Urban/Sml Stream Fld |
| Heavy rainfall caused water to flow over the road at the junction of US Highways 666 and 160.  |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>La Plata County</b>   |      |                            |                           |                          |                      |         |                     |       |                      |
| 4 N Durango  | 11   | 2100MST<br>2200MST         |                           |                          | 0                    | 0       |                     |       | Flash Flood          |
| Continued rainfall on the Missionary Ridge burned area caused mud and debris flows to close County Road 250.   |      |                            |                           |                          |                      |         |                     |       |                      |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |      |                            |                           |                          |                      |   |                     |       |                                      |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|-------|--------------------------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage | Crops | Character of Storm                   |
| <b>COLORADO, West</b>  |      |                            |                           |                          |                      |   |                     |       |                                      |
| <b>La Plata County</b>   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 3 N Durango to<br>10 N Durango   | 12   | 0900MST<br>1000MST         |                           |                          | 0                    | 0 |                     |       | Flash Flood                          |
| Heavy rainfall on the Missionary Ridge burned area caused mud and debris flows into the east Animas Valley with debris deposits up to 6 feet deep on the roads. A bulldozer became trapped on a county road by the debris flows.   |      |                            |                           |                          |                      |   |                     |       |                                      |
| <b>Rio Blanco County</b>   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 8 NW Rio Blanco to<br>17 NW Rio Blanco   | 12   | 1400MST<br>1530MST         |                           |                          | 0                    | 0 |                     |       | Urban/Sml Stream Fld                 |
| Rainfall caused mudslides across County Road 5 along Piceance Creek. The road was closed for 4.5 hours.  |      |                            |                           |                          |                      |   |                     |       |                                      |
| <b>Rio Blanco County</b>   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 20 NW Meeker   | 12   | 1430MST<br>1530MST         |                           |                          | 0                    | 0 |                     |       | Urban/Sml Stream Fld                 |
| Heavy rainfall resulted in mudslides across roads along Wilson Creek and Strawberry Creek.   |      |                            |                           |                          |                      |   |                     |       |                                      |
| <b>Montrose County</b>   |      |                            |                           |                          |                      |   |                     |       |                                      |
| Uravan   | 12   | 1445MST<br>1455MST         |                           |                          | 0                    | 0 |                     |       | Hail (1.00)                          |
| <b>Montezuma County</b>  |      |                            |                           |                          |                      |   |                     |       |                                      |
| 8 N Mancos   | 12   | 1500MST<br>1510MST         |                           |                          | 0                    | 0 |                     |       | Hail (0.88)                          |
| <b>Mesa County</b>   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 9 WSW Grand Jct  | 12   | 1520MST<br>1530MST         |                           |                          | 0                    | 0 |                     |       | Hail (0.75)                          |
| <b>Mesa County</b>   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 14 SW Grand Jct  | 12   | 1520MST<br>1600MST         |                           |                          | 0                    | 0 |                     |       | Flash Flood                          |
| Heavy rain caused flood waters and debris to block Rim Rock Road in the Colorado National Monument.  |      |                            |                           |                          |                      |   |                     |       |                                      |
| <b>Mesa County</b>   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 5 SW Grand Jct   | 12   | 1520MST<br>1615MST         |                           |                          | 0                    | 0 |                     |       | Flash Flood                          |
| Heavy rain caused water and debris one foot deep to flow across the Tiara Rado golf course. Water also flowed across many roads in the area.   |      |                            |                           |                          |                      |   |                     |       |                                      |
| <b>Montrose County</b>   |      |                            |                           |                          |                      |   |                     |       |                                      |
| Bedrock to<br>3 E Bedrock  | 12   | 1615MST<br>1730MST         |                           |                          | 0                    | 0 | 3K                  |       | Flash Flood                          |
| Heavy rain caused 1 to 3 feet of mud and debris to flow across Highway 90. A section of County Road Y11 was washed out.  |      |                            |                           |                          |                      |   |                     |       |                                      |
| <b>Garfield County</b>   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 1 SW Glenwood Spgs to<br>2 W Glenwood Spgs   | 12   | 1900MST<br>2100MST         |                           |                          | 0                    | 0 | 25K                 |       | Flash Flood                          |
| Rainfall on the Coal Seam fire burned area caused mud and debris flows across Highway 6 and 24. Mud flowed into three homes in a neighborhood below Red Mountain after debris clogged a culvert. Mud and debris flows threatened the Glenwood Springs Community Center causing the facility to be evacuated. |      |                            |                           |                          |                      |   |                     |       |                                      |
| <b>Mesa County</b>   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 5 S Gateway  | 12   | 1930MST<br>2030MST         |                           |                          | 0                    | 0 |                     |       | Flash Flood                          |
| Heavy rain resulted in a swift flow of water one foot deep across County Road 4.40 in John Brown Canyon, making the road impassable for at least an hour.  |      |                            |                           |                          |                      |   |                     |       |                                      |
| <b>La Plata County</b>   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 10 ENE Durango   | 12   | 2130MST<br>2215MST         |                           |                          | 0                    | 0 |                     |       | Flash Flood                          |
| Heavy rainfall on the Missionary Ridge burned area caused mud and debris flows to wash across County Road 502.   |      |                            |                           |                          |                      |   |                     |       |                                      |
| <b>La Plata County</b>   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 11 N Bayfield to<br>10 NW Bayfield   | 13   | 1330MST<br>1600MST         |                           |                          | 0                    | 0 |                     |       | Urban/Sml Stream Fld                 |
| Heavy rainfall resulted in water and debris 4 to 8 inches deep crossing several county roads around the Vallecito and Lemon Reservoir area. Sections of the county roads were temporarily closed as logs, mud, and rocks up to the size of bowling balls had to be removed from the roads.                   |      |                            |                           |                          |                      |   |                     |       |                                      |
| <b>Rio Blanco County</b>   |      |                            |                           |                          |                      |   |                     |       |                                      |
| 15 SE Rangely  | 16   | 2221MST<br>2225MST         |                           |                          | 0                    | 0 |                     |       | Thunderstorm Wind (G60) <sup>M</sup> |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## COLORADO, West

### **Rio Blanco County**

|                      |           |                            |  |  |          |          |  |  |   |
|----------------------|-----------|----------------------------|--|--|----------|----------|--|--|---|
| <b>15 SE Rangely</b> | <b>16</b> | <b>2321MST<br/>2325MST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Thunderstorm Wind (G50) <sup>M</sup></b> |
|----------------------|-----------|----------------------------|--|--|----------|----------|--|--|---|

### **Montrose County**

|                       |           |                            |  |  |          |          |  |  |                     |
|-----------------------|-----------|----------------------------|--|--|----------|----------|--|--|---------------------|
| <b>6 WSW Naturita</b> | <b>18</b> | <b>1215MST<br/>1223MST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Funnel Cloud</b> |
|-----------------------|-----------|----------------------------|--|--|----------|----------|--|--|---------------------|

This funnel cloud was quite large and was observed by many people as far away as Nucla. The funnel cloud may have touched down in a remote area of Monogram Mesa. A public utility employee who photographed the funnel cloud was unable to determine if it touched down due to higher terrain between him and the tail of the funnel cloud.

### **Eagle County**

|                   |           |                            |  |  |          |          |  |  |   |
|-------------------|-----------|----------------------------|--|--|----------|----------|--|--|---|
| <b>(Ege)Eagle</b> | <b>27</b> | <b>1335MST<br/>1340MST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Thunderstorm Wind (G61) <sup>M</sup></b> |
|-------------------|-----------|----------------------------|--|--|----------|----------|--|--|---|

### **Mesa County**

|                   |           |                            |  |  |          |          |  |  |                    |
|-------------------|-----------|----------------------------|--|--|----------|----------|--|--|--------------------|
| <b>1 N Fruita</b> | <b>29</b> | <b>1013MST<br/>1023MST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Hail (0.75)</b> |
|-------------------|-----------|----------------------------|--|--|----------|----------|--|--|--------------------|

### **Mesa County**

|                 |           |                            |  |  |          |          |  |  |                    |
|-----------------|-----------|----------------------------|--|--|----------|----------|--|--|--------------------|
| <b>Palisade</b> | <b>29</b> | <b>1530MST<br/>1540MST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Hail (0.75)</b> |
|-----------------|-----------|----------------------------|--|--|----------|----------|--|--|--------------------|

## CONNECTICUT, Northeast

NONE REPORTED.

## CONNECTICUT, Northwest

### **CTZ001**

#### **Litchfield**

|           |                |  |  |          |          |            |  |  |                                     |
|-----------|----------------|--|--|----------|----------|------------|--|--|-------------------------------------|
| <b>11</b> | <b>1332EST</b> |  |  | <b>0</b> | <b>0</b> | <b>20K</b> |  |  | <b>High Wind (G60) <sup>M</sup></b> |
|-----------|----------------|--|--|----------|----------|------------|--|--|-------------------------------------|

During the afternoon of September 11, a steep gradient developed between a cool Canadian high pressure area over the Great Lakes, and a double barreled low pressure area, including the circulation from Hurricane Gustaf, off the mid Atlantic Coast. This scenario resulted in a high wind event across Litchfield County. Strong northwesterly wind gusts were clocked as high as 60 mph by a weather spotter in the town of Watertown. There were reports of some trees down and spotty power outages throughout the county.

## CONNECTICUT, Southern

### **New Haven County**

|                   |           |                |  |  |          |          |  |  |                   |
|-------------------|-----------|----------------|--|--|----------|----------|--|--|-------------------|
| <b>Countywide</b> | <b>01</b> | <b>0900EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Heavy Rain</b> |
|                   | <b>02</b> | <b>2300EST</b> |  |  |          |          |  |  |                   |

A storm developed along the mid-Atlantic coast and slowly moved up the coast. This produced widespread heavy rain over the area that began during the morning on Sunday, September 1st and lasted through the day on Monday (Labor Day) September 2nd. Spotter and Official National Weather Service Observations indicate that between two and a half and three and a half inches of rain fell along the coastal sections of the county.

### **Fairfield County**

|                                 |           |                            |  |  |          |          |  |  |                    |
|---------------------------------|-----------|----------------------------|--|--|----------|----------|--|--|--------------------|
| <b>Stamford to<br/>Westport</b> | <b>02</b> | <b>1330EST<br/>1730EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Flash Flood</b> |
|---------------------------------|-----------|----------------------------|--|--|----------|----------|--|--|--------------------|

Law enforcement reported that numerous streets in Westport were flooded and had to be closed. A local newspaper reported that portions of Elm, East Main, and Dock Streets had to be closed due to flooding and that three feet of water covered portions of Cove Road in Stamford. The water rose to about two and a half feet deep at the intersection of Meadow and South Main Streets in Norwalk. State Police reported that flash flooding forced them to close the Exit 14 ramp off I-95 North in Norwalk from 230pm to 630pm and that the Route 7 connector's ramp to I-95 south was closed from 3pm to 5pm. Spotter and Official National Weather Service Observations showed that coastal sections of Fairfield County received between 2 and four and a half inches of rain from this event.

### **Fairfield County**

|                 |           |                            |  |  |          |          |  |  |                  |
|-----------------|-----------|----------------------------|--|--|----------|----------|--|--|------------------|
| <b>Stamford</b> | <b>04</b> | <b>0330EST<br/>0430EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Lightning</b> |
|-----------------|-----------|----------------------------|--|--|----------|----------|--|--|------------------|

The Stamford Police Department, as well as several newspapers, reported large tree limbs, power lines and fires as a result of lightning strikes. One such fire severely damaged a barn on James Farm Road. Connecticut Light and Power reported that approximately 43,000 of its customers lost power as a result of wires downed when lightning struck equipment or trees, which in turn fell onto wires.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## CONNECTICUT, Southern

### Fairfield County

#### Stamford

**04 0330EST 0 0 Thunderstorm Wind (G55)**

Stamford Police reported numerous trees and power lines down from severe winds produced by a line of thunderstorms that moved through during the pre-dawn hours. Northeast Utilities reported that over 40,000 customers experienced a power interruption as a result of these storms.

CTZ005>012

**Northern Fairfield - Northern New Haven - Northern Middlesex - Northern New London - Southern Fairfield - Southern New Haven - Southern Middlesex - Southern New London**

**11 1000EST 1 0 Wind**  
**1730EST**

A strong pressure gradient developed between Hurricane Gustav, which intensified as it moved offshore, and a high pressure system, which built southeast. Strong and gusty winds quickly developed behind a strong cold front that trailed from a low pressure system over Northeast New England around 10:00 am EDT.

Wind speeds were sustained from 25 to 35 mph with peak gusts from 45 to 55 mph. These winds, which lasted at least 6 hours, resulted in 1 death and widespread power outages caused by down trees.

In Westport, a driver was killed when a tree fell on his car around 4 pm.

Connecticut Utility Companies, including Northeast Utilities reported between 140,000 and 150,000 homes and businesses without power. M?VE

### Fairfield County

#### Countywide

**26 0900EST 0 0 Heavy Rain**  
**28 0900EST**

### Middlesex County

#### Countywide

**26 0900EST 0 0 Heavy Rain**  
**28 0900EST**

### New Haven County

#### Countywide

**26 0900EST 0 0 Heavy Rain**  
**28 0900EST**

### New London County

#### Countywide

**26 0900EST 0 0 Heavy Rain**  
**28 0900EST**

The remnants of Hurricane Isidore passed just to the west and northwest of the New York Metropolitan area. The result was a widespread significant rainfall event that began on Thursday morning September 26th and tapered off early Saturday morning September 28th. During this two day period, the southern half of the state of Connecticut received between one and a half and two inches of rain. The rain was also accompanied by strong and persistent winds between 20 and 30 MPH sustained along with gusts around 40 MPH that resulted in numerous downed tree branches and even knocked down a few larger tree limbs.

## DELAWARE

DEZ001>004

### New Castle - Kent - Inland Sussex - Delaware Beaches

**01 0000EST 0 0 0 Drought**  
**30 2359EST**

Delaware entered September with continuing drought conditions. Many daily, monthly and all time record low levels for streamflow and groundwater levels were being set and an outdoor burning ban was in effect. Lawn and garden businesses were suffering as homeowners held off on landscape designs and the grass became dormant. Landscapers were given temporary certificates of occupancy for limited watering of new landscaping. Shallow wells were going dry in Sussex County including older developments in Lewes and Rehoboth Beach. Governor Ruth Ann Minner's declared state of drought emergency for New Castle County north of the Chesapeake and Delaware Canal remained in effect. The drought emergency imposed mandatory restrictions in northern New Castle County. The governor also asked downstate residents to voluntarily reduce their water use. Heavy rain, especially in Sussex County, on September 1st initiated the return of normal precipitation. The heavy rain on the 1st permitted Wilmington to pump water from the Brandywine Creek back into the Hoopes Reservoir for emergency storage. The return of rain permitted the state to lift all environmental and general burning bans as of the 6th. The rain came too late to help most crops with the exception of late planted soybeans. Governor Ruth Ann Minner requested the U.S. Department of Agriculture Secretary Ann Venneman declare a crop disaster in Delaware. About eighty-five percent of farmers have losses of greater than 30 percent. Corn, soybeans, lima beans, snap beans and hay all sustained serious damage. It was expected to be the worst statewide vegetable harvest in 15 years. The mid month crop report showed that nearly 70 percent of the corn, sorghum range and pastures were either in poor or very poor condition. About half of the soybean crop was also in poor or very poor condition. Only eighteen percent of the subsoil had adequate moisture. In spite of the return of normal precipitation, streamflows in New Castle County were still near record low levels at the end of the month. The drought sped leaf changes in the state as 10 to 20 percent of trees already were changing colors and dropping their leaves. Experts were expecting less color this autumn. As a result of recent droughts, Newark will have a new reservoir coming on line.

## Storm Data and Unusual Weather Phenomena

[illegible]**DELAWARE**

On a county weighted average September monthly precipitation was 7.6 inches in Sussex County, 6.2 inches in Kent County and 3.6 inches in New Castle County. Normal is around 3.7 inches. The September monthly precipitation total in Georgetown (Sussex County) was 8.22 inches and at the New Castle County Airport was 3.42 inches.

The Delaware River Basin Commission continued its drought emergency declaration for the entire Delaware River drainage basin. The New York City Reservoirs which feed the Delaware River fell from 59.7 percent of capacity on September 1st to 50.4 percent of capacity on October 1st.

## Sussex County Countywide

|    |                    |   |   |             |
|----|--------------------|---|---|-------------|
| 01 | 0700EST<br>1500EST | 0 | 0 | Flash Flood |
|----|--------------------|---|---|-------------|

Very heavy rain which persisted over Sussex County from midnight through early afternoon on the 1st caused considerable poor drainage flooding as well as flooding of area streams. In Georgetown, 3.41 inches of rain fell between 6 a.m. and 10 a.m. EDT. Through 110 p.m. on the 1st, a trained SKYWARN Spotter reported 7.50 inches of rain in Millsboro. There were road closures in about two dozen locations throughout the county including U.S. Routes 9 and 113 and Delaware State Road 20. Most of the road closures were east of U.S. Route 113. Two vehicles were flooded at the intersection of U.S. Routes 9 and 113. The Georgetown Plaza Shopping Center flooded and vehicles were stranded in the Walmart parking lot in Seaford. Roads were also reported flooded in Millsboro and Lewes. In Oak Orchard roads and yards were flooded. The worst damage from the heavy rain occurred on the 3rd in Millsboro. The middle section of the Christian Storehouse roof collapsed. The building was in the process of getting a new roof installed and older sections could not support the weight of the rain and the bundles of new shingles which were left on the roof. Items (clothing) on the first floor thrift shop were lost. The building was condemned. The heavy rain also caused a microorganism bloom in the Torquay Canal. Storm totals included 8.12 in Lewes, 6.65 inches in Georgetown and 6.17 inches in Milford (Sussex/Kent County Line). Wind gusts to around 30 mph and the heavy rain pushed over some shallow trees and broke some tree branches during the morning of the 1st. About 3,000 homes and businesses lost power.

## DEZ001&gt;004

### New Castle - Kent - Inland Sussex - Delaware Beaches

| New Castle | Holt               | Inland Sussex | Downware Beaches | Wind |
|------------|--------------------|---------------|------------------|------|
| 11         | 0900EST<br>1800EST |               | 0      0         |      |

The pressure difference between a strong high pressure system in the central part of the country and Tropical Storm Gustav located well east of the Delmarva Peninsula produced strong gusty north west winds throughout the day on the 11th. The strongest gusts occurred during the early afternoon and averaged between 35 mph and 45 mph. The winds pulled down tree limbs and caused power outages to about 4,000 Conectiv Power Delivery customers. All power was restored by the evening of the 11th. Peak wind gusts included 44 mph at the New Castle County Airport, 41 mph in Dover (Kent County) and 31 mph in Georgetown (Sussex County).

**Sussex County  
Rehoboth Beach**

|    |                    |   |   |   |   |              |
|----|--------------------|---|---|---|---|--------------|
| 29 | 0000EST<br>1100EST | 1 | 0 | 0 | 0 | Rip Currents |
|----|--------------------|---|---|---|---|--------------|

Rip currents helped claim the life of a 33-year-old man in Rehoboth Beach. The man and a friend went swimming at 1 a.m. EDT early on the 29th. The friend managed to get away from the current. The body was found at 3 a.m. EDT. Later that day a woman was rescued from the surf at 11 a.m. EDT near Stockley Street. A high pressure system built over New England during the evening of the 28th and the morning of the 29th. Northeast flow around the high along the ocean usually enhances both the number and strength of rip currents. M331W

## DISTRICT OF COLUMBIA

NONE REPORTED.

**FLORIDA, East Central**

## FLZ041

## Volusia

|    |                    |   |   |   |   |                |
|----|--------------------|---|---|---|---|----------------|
| 04 | 1000EST<br>2200EST | 0 | 0 | 0 | 0 | Tropical Storm |
|----|--------------------|---|---|---|---|----------------|

Tropical Storm Edouard approached east central Florida from the east, and moved on shore in northern Volusia County. Even though tropical storm warnings were issued for the storm, sustained tropical storm force winds were not observed. Wind gusts to 34 knots were recorded in a rain band at Patrick AFB as the storm approached. Some inland locations received over two inches of rain, producing roadway flooding along the Saint Johns River in Seminole and Volusia counties.

## FLORIDA, Extreme Southern

**Monroe County**

## Key West

|    |                    |   |   |       |                         |
|----|--------------------|---|---|-------|-------------------------|
| 11 | 1645EST<br>1650EST | 0 | 0 | 0.50K | Thunderstorm Wind (G50) |
|----|--------------------|---|---|-------|-------------------------|

Tree limbs 8 to 10 inches in diameter felled, along with damage to wood commercial signs in western portions of Old Town Key West, and a city lamp post near Whitehead and Front Streets.

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002  |      |                            |                           |                          |                      |         |                     |       |                      |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|----------------------|
| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm   |
|   |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                      |
| <b><u>FLORIDA, Northeastern</u></b>   |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>St. Johns County</b>   |      |                            |                           |                          |                      |         |                     |       |                      |
| St Augustine Beach  | 01   | 1715EST                    |                           |                          | 1                    | 0       |                     |       | Rip Currents         |
| Russian foreign exchange student died in rip current.<br>M?IW   |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>St. Johns County</b>   |      |                            |                           |                          |                      |         |                     |       |                      |
| St Augustine  | 24   | 1000EST<br>1200EST         |                           |                          | 0                    | 0       |                     |       | Urban/Sml Stream Fld |
| Street Flooding.  |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Flagler County</b>   |      |                            |                           |                          |                      |         |                     |       |                      |
| Flagler Beach   | 24   | 1045EST                    |                           |                          | 0                    | 0       | 10K                 |       | Tstm Wind/Hail       |
| Single large tree fell on house.  |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Putnam County</b>  |      |                            |                           |                          |                      |         |                     |       |                      |
| 5 E Johnson   | 24   | 1524EST                    |                           |                          | 0                    | 0       |                     |       | Funnel Cloud         |
| Public reported a possible touchdown near Hewitt Lake however no damage could be found to confirm event.  |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Duval County</b>   |      |                            |                           |                          |                      |         |                     |       |                      |
| Countywide  | 24   | 1730EST<br>1930EST         |                           |                          | 0                    | 0       | 20K                 |       | Flash Flood          |
| Numerous streets flooded and at least one business in Jacksonville Beach flooded. Stranded elderly motorist had to be rescued after her car was stranded in flood waters and began to float.  |      |                            |                           |                          |                      |         |                     |       |                      |
| <b><u>FLORIDA, Northwest</u></b>  |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>FLZ007-007-009&gt;014-016&gt;017-027&gt;028</b>  |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Inland Walton - Holmes - Washington - Jackson - Bay - Calhoun - Gulf - Gadsden - Leon - Wakulla - Taylor</b>   |      |                            |                           |                          |                      |         |                     |       |                      |
|   | 14   | 0000EST                    |                           |                          | 2                    | 0       | 380K                |       | Tropical Storm       |
|   | 15   | 2300EST                    |                           |                          |                      |         |                     |       |                      |
| Tropical Storm Hanna came ashore near Mobile, AL during the late morning hours of September 14. Maximum sustained winds were just shy of tropical storm strength prior to and during landfall. The main effect from Hanna was minor flooding and beach erosion along the Florida Panhandle coast, where storm surge heights ranged from two to four feet. The lowest sea-level pressure was 1009.5 mb. Rainfall totals ranged from 9.68 inches at Chipley, FL, to 2.28 inches at Apalachicola, FL. Minor river flooding was observed above Newport, FL, where the St. Marks river crested a tenth of a foot above flood stage on September 15. Some county roads in the Panhandle were closed due to flooding. Heavy rains also flooded several homes in Perry, FL. Gusty thunderstorm winds blew down some power lines and small trees. An estimated 15,000 customers in coastal Walton County were without power. Rip currents were responsible for two drownings-one at Seagrove Beach, FL, and the other at Panama City Beach, FL. M25IW, M60IW |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Gadsden County</b>   |      |                            |                           |                          |                      |         |                     |       |                      |
| East Portion  | 14   | 1100EST<br>1300EST         |                           |                          | 0                    | 0       | 10K                 |       | Flash Flood          |
| Up to four inches of rain flooded a few county roads. Minor street flooding was observed in Quincy. Reported by the Gadsden County Sheriff.   |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Leon County</b>  |      |                            |                           |                          |                      |         |                     |       |                      |
| Countywide  | 14   | 1100EST<br>1300EST         |                           |                          | 0                    | 0       | 10K                 |       | Flash Flood          |
| Up to five inches of rain flooded numerous streets in downtown Tallahassee. A few county roads were closed to flood waters. Reported by the Leon County Sheriff and Tallahassee Police.   |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Wakulla County</b>   |      |                            |                           |                          |                      |         |                     |       |                      |
| North Portion   | 14   | 1100EST<br>1300EST         |                           |                          | 0                    | 0       | 10K                 |       | Flash Flood          |
| Up to five inches of rain flooded several streets in Crawfordville and Woodville. Portions of U.S. Highway 319 and State Road 361 were under water. Reported by the Wakulla County Sheriff.   |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Washington County</b>  |      |                            |                           |                          |                      |         |                     |       |                      |
| Countywide  | 14   | 2230EST                    |                           |                          | 0                    | 0       | 10K                 |       | Flash Flood          |
|   | 15   | 0000EST                    |                           |                          |                      |         |                     |       |                      |
| Six to eight inches of rain flooded several county roads. Some street flooding was observed in Chipley. Reported by the Washington County EMA.  |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Taylor County</b>  |      |                            |                           |                          |                      |         |                     |       |                      |
| Perry   | 15   | 1300EST<br>1500EST         |                           |                          | 0                    | 0       | 100K                |       | Flash Flood          |
| Torrential rain from slow-moving thunderstorms flooded several homes. Reported by the Taylor County Sheriff.  |      |                            |                           |                          |                      |         |                     |       |                      |
| <b>Bay County</b>   |      |                            |                           |                          |                      |         |                     |       |                      |
| Panama City Beach   | 14   | 1200EST                    |                           |                          | 0                    | 0       | 15K                 |       | Storm Surge          |
|   | 15   | 0000EST                    |                           |                          |                      |         |                     |       |                      |
| Storm surge heights of three feet caused minor beach erosion. Reported by the Bay County EMA.   |      |                            |                           |                          |                      |         |                     |       |                      |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |      |                            |                           |                          |                      |         |                     |       |                    |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b>FLORIDA, Northwest</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Gulf County</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Southwest Portion  | 14   | 1200EST                    |                           |                          | 0                    | 0       | 15K                 |       | Storm Surge        |
|  | 15   | 0000EST                    |                           |                          |                      |         |                     |       |                    |
| Storm surge heights of two to three feet caused minor beach erosion near Cape San Blas and Mexico Beach. One home on Cape San Blas was damaged. Reported by the Gulf County EMA.   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Walton County</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Grayton Beach  | 14   | 1200EST                    |                           |                          | 0                    | 0       | 25K                 |       | Storm Surge        |
|  | 15   | 0000EST                    |                           |                          |                      |         |                     |       |                    |
| Storm surge heights of four feet caused minor erosion along the Grayton, Miramar, Seagrove and Santa Rosa beaches. Reported by the Walton County EMA.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Walton County</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide   | 14   | 2100EST                    |                           |                          | 0                    | 0       | 125K                |       | Flash Flood        |
|  |      | 2300EST                    |                           |                          |                      |         |                     |       |                    |
| Torrential rainfall produced significant flooding in the Ponce De Leon area on State Highway 81. Up to eight inches of water covered several roads. Gusty winds and saturated grounds downed several trees and power lines. Reported by the Walton County EMA. |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Bay County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| North Portion  | 14   | 2230EST                    |                           |                          | 0                    | 0       | 10K                 |       | Flash Flood        |
|  | 15   | 0000EST                    |                           |                          |                      |         |                     |       |                    |
| Two to four inches of rain caused flooding of a few county roads. Reported by the Bay County EMA.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Calhoun County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide   | 14   | 2300EST                    |                           |                          | 0                    | 0       | 10K                 |       | Flash Flood        |
|  | 15   | 0100EST                    |                           |                          |                      |         |                     |       |                    |
| Three to five inches of rain flooded a few county roads. Reported by the Calhoun County Sheriff.   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Holmes County</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| East Portion   | 14   | 2300EST                    |                           |                          | 0                    | 0       | 5K                  |       | Flood              |
|  | 15   | 0100EST                    |                           |                          |                      |         |                     |       |                    |
| Minor street flooding in Bonifay. Reported by the Holmes County EMA.   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Bay County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Panama City Beach  | 14   | 1815EST                    |                           |                          | 1                    | 0       |                     |       | Rip Currents       |
| A man drowned from a severe rip current caused by Tropical Storm Hanna. Reported by the Bay County EMA.  |      |                            |                           |                          |                      |         |                     |       |                    |
| M25IW  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Jackson County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide   | 14   | 2345EST                    |                           |                          | 0                    | 0       | 25K                 |       | Flash Flood        |
|  | 15   | 0130EST                    |                           |                          |                      |         |                     |       |                    |
| Several county roads were flooded. Reported by the Jackson County EMA.   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Jackson County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Graceville   | 15   | 0000EST                    |                           |                          | 0                    | 0       | 5K                  |       | Thunderstorm Wind  |
| Several downed trees and power lines reported by the Jackson County EMA.   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Jackson County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Grand Ridge  | 15   | 0030EST                    |                           |                          | 0                    | 0       | 5K                  |       | Thunderstorm Wind  |
| Several downed trees and power lines reported by the Jackson County EMA.   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Walton County</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Seagrove Beach   | 15   | 0735EST                    |                           |                          | 1                    | 0       |                     |       | Rip Currents       |
| An elderly man drowned while attempting to rescue a young boy from a severe rip current caused by Tropical Storm Hanna. Reported by the Walton County EMA.   |      |                            |                           |                          |                      |         |                     |       |                    |
| M60IW  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Walton County</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Santa Rosa Beach to<br>1 NW Santa Rosa   | 25   | 1600EST                    | 1                         | 100                      | 0                    | 0       | 400K                |       | Tornado (F1)       |
|  |      | 1605EST                    |                           |                          |                      |         |                     |       |                    |
| A tornado touched down and damaged numerous mobile homes along U.S. Highway 98. One home was blown completely off its foundation. Numerous trees and power lines were snapped. Reported by the Walton County EMA.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Walton County</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Choctaw Beach  | 25   | 1620EST                    |                           |                          | 0                    | 0       | 35K                 |       | Thunderstorm Wind  |
| A house was damaged by fallen trees. Reported by the Walton County EMA.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Walton County</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Sandestin to<br>1 NW Sandestin   | 25   | 1700EST                    | 1                         | 100                      | 0                    | 0       | 550K                |       | Tornado (F1)       |
|  |      | 1705EST                    |                           |                          |                      |         |                     |       |                    |
| A tornado touched down and damaged numerous homes near U.S. Highway 98. Numerous trees and power lines were snapped. Reported by the Walton County EMA.  |      |                            |                           |                          |                      |         |                     |       |                    |

# Storm Data and Unusual Weather Phenomena

September 2002

|   |          |                            |                           |                          |                                |                                 |                                 |       | September 2002     |
|---|----------|----------------------------|---------------------------|--------------------------|--------------------------------|---------------------------------|---------------------------------|-------|--------------------|
| Location  | Date     | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed | Number of<br>Persons<br>Injured | Estimated<br>Damage<br>Property | Crops | Character of Storm |
| <b><u>FLORIDA, Northwest</u></b>  |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| <b>Jackson County</b>   |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| 1 S Graceville to<br>1 W Graceville   | 25       | 1825EST<br>1830EST         | 2                         | 75                       | 0                              | 1                               | 150K                            |       | Tornado (F0)       |
| A tornado touched down just south of Graceville and moved northwest. Much of the damage occurred on Spruce Road, Shadow Lane and State Highway 77. Four homes were damaged. One barn was destroyed, while the roof from another barn was blown a quarter mile away. Numerous trees and power lines were snapped. An estimated 440 customers in Graceville were without power. A man was injured when the roof of his auto shop collapsed. Reported by the Jackson County EMA.   |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| <b>Holmes County</b>  |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| Tendil Crossing   | 25       | 1835EST                    | 0.2                       | 50                       | 0                              | 0                               | 100K                            |       | Tornado (F0)       |
| A tornado touched down and damaged the Poplar Springs School. A school bus was also damaged. Several trees were snapped and hurled into the school's roof and east corridor. Reported by the Holmes County EMA.   |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| <b>FLZ008&gt;009-011&gt;012-014&gt;015-027&gt;028-034</b>   |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| <b>Coastal Walton - Holmes - Jackson - Bay - Gulf - Franklin - Wakulla - Taylor - Dixie</b>   |          |                            |                           |                          |                                |                                 |                                 |       |                    |
|   | 25<br>27 | 1800EST<br>0000EST         |                           |                          | 0                              | 1                               | 11.0M                           |       | Tropical Storm     |
| Tropical Storm Isidore came ashore near New Orleans, LA during the early morning hours of September 26. Maximum sustained winds reached 46 mph along the Panhandle coast. The lowest sea-level pressure recorded was 998 mb. Storm rainfall totals were several inches less than Tropical Storm Hanna, with amounts from two to six inches. The main impact from Isidore was storm surge flooding, beach erosion and tornadoes. Maximum storm surge heights ranged from four to seven feet along the Panhandle coast, to two to four feet along the Big Bend coast. Severe beach erosion occurred along coastal Walton and Bay counties where nearly a million cubic yards of sand was lost. Further east, minor to moderate beach erosion occurred. Several tornadoes spun up from Isidore's broad circulation, descended on Jackson, Holmes and coastal Walton counties. One man was injured when a roof collapsed on him near Graceville, FL. Santa Rosa Beach, Choctaw Beach and Sandestin, FL received the brunt of the tornadoes' fury with numerous mobile homes damaged, as well as downed trees and power lines. |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| <b>Bay County</b>   |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| Southwest Portion   | 25<br>26 | 1800EST<br>1800EST         |                           |                          | 0                              | 0                               | 4M                              |       | Storm Surge        |
| Storm surge heights of five feet combined with large battering waves caused severe beach erosion. An estimated 500,000 cubic yards of sand was lost. Water was above the boardwalk at many locations. Reported by the Bay County EMA.   |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| <b>Dixie County</b>   |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| Horseshoe Beach   | 25       | 1800EST                    |                           |                          | 0                              | 0                               | 10K                             |       | Storm Surge        |
| Storm surge heights of two to three feet caused minor beach erosion. Reported by the Dixie County EMA.  |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| <b>Franklin County</b>  |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| Carrabelle Beach  | 25       | 1800EST                    |                           |                          | 0                              | 0                               | 500K                            |       | Storm Surge        |
| Storm surge heights of four feet combined with large battering waves eroded sand up to five feet deep at Dog Island. Two homes partially collapsed. At St. George Island, moderate beach erosion occurred. Overwash undermined a portion of Highway 98 near Carrabelle Beach. Reported by the Franklin County EMA.  |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| <b>Gulf County</b>  |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| Southwest Portion   | 25<br>26 | 1800EST<br>1800EST         |                           |                          | 0                              | 0                               | 1M                              |       | Storm Surge        |
| Storm surge heights of four feet combined with large battering waves eroded sand up to six feet deep at Cape San Blas. A protective berm and several septic tanks were damaged. The Florida DOT reported that State Road 30 on Cape San Blas was washed over at the Stumphole, with about four feet of roadway eroded for a distance of 100 feet. St. Joseph Peninsula State park was closed. Reported by the Gulf County EMA.  |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| <b>Taylor County</b>  |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| Keaton Beach  | 25<br>26 | 1800EST<br>1800EST         |                           |                          | 0                              | 0                               | 10K                             |       | Storm Surge        |
| Storm surge heights of three feet caused minor beach erosion. Reported by the Taylor County EMA.  |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| <b>Wakulla County</b>   |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| Southwest Portion   | 25<br>26 | 1800EST<br>1800EST         |                           |                          | 0                              | 0                               | 250K                            |       | Storm Surge        |
| Storm surge heights of three to four feet combined with large battering waves eroded a 30-foot wide section of beach at Mashles Island near Panacea. Reported by the Wakulla County EMA.  |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| <b>Walton County</b>  |          |                            |                           |                          |                                |                                 |                                 |       |                    |
| Southwest Portion   | 25<br>26 | 1800EST<br>1800EST         |                           |                          | 0                              | 0                               | 4.2M                            |       | Storm Surge        |
| Storm surge heights from five to seven feet combined with large battering waves caused severe beach erosion. An estimated 400,000 cubic yards of sand was lost. Water was above the boardwalk at many locations. Sand fencing, trash receptacles and beach kiosks were also damaged. Reported by the Walton County EMA.   |          |                            |                           |                          |                                |                                 |                                 |       |                    |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## FLORIDA, Southern

### **Broward County**

**Oakland Park**      **11**      **1320EST**      **0**      **0**      **Funnel Cloud**  
A SKYWARN spotter sighted a funnel cloud.

### **Palm Beach County**

**8 W West Palm Beach**      **12**      **1205EST**      **0**      **0**      **Funnel Cloud**  
Emergency Management Officials reported a funnel cloud.

### **Glades County**

**10 W Ortona to  
2 S Ortona**      **13**      **1815EST**      **0**      **0**      **Thunderstorm Wind (G60)**  
Trees and power lines were blown down.

## FLORIDA, West Central

### **Polk County**

**Lakeland**      **04**      **1715EST**      **0**      **0**      **Urban/Sml Stream Fld**  
Heavy rains of 3 to 5 inches in 90 minutes combined to flood intersections and low lying areas, some up to waist deep.

### **Pinellas County**

**(Pie)St Pete/Clrwate**      **05**      **1800EST**      **0**      **1**      **Lightning**  
An airline employee working on a plane was injured as lightning struck the plane.

### **Pinellas County**

**Seminole Park**      **06**      **1630EST**      **0**      **0**      **50K**      **Tstm Wind/Hail**  
Minor widespread roof, carport, and shed damage was reported at a mobile home park. The wind was measured at 42 mph at the intersection of 102nd Avenue and 113 street, about one mile north of the damage.

### **Pinellas County**

**Largo**      **06**      **1638EST**      **0**      **0**      **Hail (0.75)**

### **Pinellas County**

**4 NW Pinellas Park**      **06**      **1900EST**      **0**      **0**      **Urban/Sml Stream Fld**  
Five inches of rain in three hours caused widespread street flooding near the intersection of U.S. 19 and 38th Street.

### **Charlotte County**

**Punta Gorda**      **09**      **1740EST**      **0**      **0**      **Funnel Cloud**  
Several eyewitnesses viewed the funnel cloud to the west

### **Hillsborough County**

**3 SW Brandon**      **19**      **1540EST**      **0**      **0**      **Funnel Cloud**  
Trained spotter reported a funnel cloud just east of Interstate 75 about 2 miles south of Highway 60.

### **Lee County**

**2 SW Ft Myers**      **20**      **1405EST**      **0**      **0**      **Funnel Cloud**  
**1415EST**  
Trained spotter reported a rope-like funnel extending out of the side of the thunderstorm.

### **Pinellas County**

**Clearwater**      **20**      **1628EST**      **0**      **1**      **Lightning**  
A 79 year old female was transported to the hospital after being struck by lightning at her home.

### **Manatee County**

**2 SSE Anna Maria**      **22**      **1420EST**      **1**      **0**      **Rip Currents**  
A 60 year old male German tourist lost his life as a result of rip currents while swimming with his wife in the Gulf of Mexico. Relatively large waves of three to five feet were found at the Manatee County Public Beach as a result of Hurricane Isidore spinning over Mexico's Yucatan Peninsula. Tides of one to two feet above astronomical normals combined with the wave action to produce rip currents. Lifeguards were flying caution flags warning of rough surf.  
M60IW

## FLORIDA, West Panhandle

### **FLZ001>006**

**Inland Escambia - Coastal Escambia - Inland Santa Rosa - Coastal Santa Rosa - Inland Okaloosa - Coastal Okaloosa**

**12**      **0900CST**      **0**      **0**      **100K**      **Tropical Storm**  
**14**      **1200CST**

Tropical Storm Hanna moved across the area during the morning of September 14. The area was put under a Tropical Storm Watch at 900 AM CST on September 12, then a Tropical Storm Warning at 300 AM CST on September 13. The warning was dropped at NOON CST on September 14 as the remains of Hanna moved inland across southwest Alabama.

Hanna made landfall near the west end of Dauphin Island around 900 AM CST Saturday morning.

Some of the winds recorded across Southwest Alabama and Northwest Florida were as follows: Mobile Regional Airport, sustained winds of 25 knots with gusts to 30 knots. Pensacola Regional Airport, sustained wind of 47 knots with gusts to 57 knots. Pensacola Naval Air Station, sustained wind of 41 knots with gusts to 48 knots. Eglin Air Force Base in Valpariaso, sustained wind of 32 knots with gusts to 41 knots. Hurlburt Air Force Base in Mary Esther, sustained wind of 37 knots with gusts to 54 knots. Dauphin Island, sustained wind of 35 knots with a gust to 44 knots. One of the highest wind speeds was on Pensacola

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## FLORIDA, West Panhandle

Beach where a sustained wind of 43 knots with a gust of 59 knots was recorded.

The lowest sea level pressures were recorded at Dauphin Island with 1005 MB and at Mobile Regional Airport and Brookley Field with 1006 MB.

The highest two day rainfall totals ending at midnight on September 14 across the area were Coden, AL with 7.55 inches, Belle Fontaine, AL with 5.75, Destin, FL with 5.41 inches and Crestview, FL with 5.04 inches.

The highest storm tides were at Dauphin Island with 3.7 feet and Pensacola with 3.4 feet.

Minor beach erosion occurred from Dauphin Island in Alabama to Navarre Beach in Florida.

Storm tide flooding occurred on the west end of Dauphin Island and in the south part of Mobile county and also along the Causeway that crosses Mobile Bay. Tidal flooding also took place along the Baldwin county beaches and along Pensacola Beach and Navarre Beach in Escambia and Santa Rosa counties in Florida.

## Escambia County

### Pensacola Beach

|           |                |          |          |                     |
|-----------|----------------|----------|----------|---------------------|
| <b>14</b> | <b>1300CST</b> | <b>1</b> | <b>0</b> | <b>Rip Currents</b> |
|           | <b>1305CST</b> |          |          |                     |

A twenty year old student from a local college had gone to Pensacola Beach with his brother. They were body surfing in waist-deep water when a rip current started pulling them out. One brother was able to make it ashore but the other one drowned in the rough water. Red flags were flying warning of very rough surf because of Tropical Storm Hanna.

M20IW

## FLZ001>006

### Inland Escambia - Coastal Escambia - Inland Santa Rosa - Coastal Santa Rosa - Inland Okaloosa - Coastal Okaloosa

|           |                |          |          |              |                       |
|-----------|----------------|----------|----------|--------------|-----------------------|
| <b>24</b> | <b>0900CST</b> | <b>0</b> | <b>0</b> | <b>11.2M</b> | <b>Tropical Storm</b> |
| <b>26</b> | <b>1500CST</b> |          |          |              |                       |

For the second time during the month the area was threatened by a tropical storm. Tropical Storm Isidore threatened the area Tuesday, Wednesday and Thursday. We were put under a Tropical Storm Warning at 900 AM CST on September 24. The Tropical Storm Warning was dropped at 300 PM CST on September 26 as the remains of Isidore moved across eastern Mississippi. Isidore moved ashore over the Southeast Louisiana Coast between 200 and 300 AM CST on September 26. Although the center of Isidore did not move over our area, the strongest winds and heaviest rains were east of the center with most of the damage across Southwest Alabama and Northwest Florida.

Some of the winds recorded across Southwest Alabama and Northwest Florida were as follows: Mobile Airport, sustained wind of 42 knots with gusts to 50 knots. Mobile Brookley Field, sustained wind of 40 knots with gusts to 50 knots. Dauphin Island, sustained wind of 42 knots with gusts to 52 knots. Cedar Point, sustained wind of 35 knots with gusts to 53 knots. Pensacola Airport, sustained wind of 29 knots with gusts to 44 knots. Pensacola Naval Air Station, sustained wind of 31 knots with gusts to 43 knots. Hurlburt Air Force Base in Mary Esther, sustained wind of 33 knots with gusts to 49 knots. Pensacola Beach, sustained wind of 40 knots with gusts to 58 knots. Perdido Key, sustained wind 37 knots with gusts to 53 knots.

The lowest sea level pressure was 991 MB at Mobile Airport, Dauphin Island and Semmes, Alabama.

Two day rainfall totals across the area ending at 1100 AM CST on September 26 were as follows in Alabama: Robertsdale 11.76, Semmes 11.90, Bay Minette 11.00, Mobile (4 S of MOB) 11.00, Brewton 10.29, Gulf State Park 10.20 and Mobile (Municipal Park) 10.12. In Florida: Milton 15.72, Pace 13.76, Bratt 10.27, Munson 10.14, Pensacola Airport 9.09, Pea Ridge 8.74 and Milligan 8.27. In Mississippi: Wiggins 9.80, Merrill 9.19, Leakesville and Waynesboro 7.15.

The highest storm tides along the Alabama coast were as follows: Middle Bay Light House 6.1 feet, Mobile State Docks 5.9 feet, Cedar Point 5.0 feet, and Dauphin Island 4.4 feet. Along the Florida coast, some storm tides were as follows: Pensacola 5.2 feet, Perdido Pass 4.5 feet, Destin East Pass 3.8 feet, and Santa Rosa Sound 3.4 feet.

Major beach erosion occurred on Dauphin Island and along the beaches of Baldwin county in Alabama, as well as along the Florida panhandle coastline from Pensacola Beach to Navarre Beach.

Major storm tide flooding occurred in Mobile County Alabama on the west end of Dauphin Island, along low lying coastal areas of the southern part of the county, and along the Causeway that crosses the northern part of Mobile Bay. Storm tide flooding also occurred in Baldwin County, primarily in the West Beach and Orange Beach areas. Storm tide flooding also occurred along portions of the Florida coastline from Pensacola Beach to Navarre Beach. Moderate river flooding occurred in Mobile and Baldwin counties in Alabama, with some river flooding also reported in Escambia, Santa Rosa, and Okaloosa counties of the Florida panhandle.

Two F0 tornadoes occurred in coastal Okaloosa county in Florida, two F0 tornadoes occurred in coastal Baldwin county of Alabama and one F0 In Mobile county. Minor structural damage was reported with each tornado, but for the most part, only tree damage occurred.

Primary storm effects were along the coasts of Alabama and the Florida panhandle. In Mobile county, the main effects were the tidal flooding that occurred on Dauphin Island. The berm on the west end of the island was destroyed. Bayou La Batre and the road leading to Dauphin Island were flooded by above normal tide levels. Two feet of water covered Water Street in downtown Mobile. The causeway at the northern end of Mobile Bay was closed for a time due to high water, and some of the businesses on the causeway were flooded. Some houses along Bayou Sara and the Fowl River had some water in them. In Baldwin County, major beach erosion occurred along an area know as West Beach. Surges in this area were estimated at 5.5 to 6.5 feet. Wind driven waves on top of this surge deposited sand across West Beach Road and the wave action removed a couple of feet of sand from underneath several beach houses. Some houses along the Fish River were also flooded. In Escambia County major beach erosion occurred on Pensacola Beach. The road to Fort Pickens and the road between Pensacola Beach and Navarre Beach was closed due to the road being overwashed with several feet of sand. The island was breached in a couple of places. The Santa Rosa county

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## FLORIDA, West Panhandle

coast sustained major beach erosion as well...primarily around Navarre Beach. Lastly, Okaloosa county experience some beach erosion, but not as extensively as did the counties just to the west. Highway 98 between Fort Walton and Destin had a couple of feet of water across it, but at least one lane remained open and passable.

### **Escambia County Southwest Portion**

25 1100CST 0 0 Flash Flood  
1200CST

Heavy rains across the southwest part of the county caused many secondary roads to flood. The roads became impassable and had to be closed for about an hour. The water drained out of the streets after the heavy rains stopped.

### **Santa Rosa County Pace to Milton**

25 1305CST 0 0 Flash Flood  
1400CST

Heavy rains along U. S. Highway 90, between Pace and Milton, caused many secondary roads to flood. The streets had to be closed for an hour until the excess water from the heavy rains had time to drain.

### **Okaloosa County Florosa**

25 1330CST 0.2 30 0 0 20K Tornado (F0)  
1335CST

A weak tornado blew down trees and power lines and did minor roof damage to a couple of homes and also damaged a couple of outbuildings near Florosa. The storm that spawned the tornado moved in from the Gulf of Mexico ahead of Tropical Storm Isidore.

### **Okaloosa County South Portion**

25 1620CST 0 0 Flash Flood  
2000CST

Heavy rains caused street flooding across the south part of the county. Several streets between Mary Esther and Fort Walton Beach had to be closed for several hours due to the high water. Rainfall estimates across the area were between two and five inches.

### **Okaloosa County Shalimar**

25 1810CST 0.1 20 0 0 25K Tornado (F0)  
1812CST

A weak tornado moved off the bay and damaged a home near Shalimar. The storm also blew down trees and power lines near the home. Most of the damage to the home was to the roof and a couple of windows.

### **Escambia County South Portion**

25 2140CST 0 0 Flood  
26 1500CST

Heavy rains from Tropical Storm Isidore caused high water to collect in many streets in the south part of the county. Several streets were closed for hours due the standing water.

### **Santa Rosa County South Portion**

25 2140CST 0 0 Flood  
26 1500CST

Heavy rains from Tropical Storm Isidore caused standing water across several streets in the south part of the county. Many streets were closed for hours due to the high water.

### **Okaloosa County South Portion**

26 0100CST 0 0 Flood  
1500CST

Heavy rains from Tropical Storm Isidore caused standing water in many of the streets across the south part of the county. Several roads had to be closed for hours due to the high water.

### **Santa Rosa County Pace**

26 0755CST 0 0 Funnel Cloud  
0757CST

A funnel cloud was reported just east of Pace near Pea Ridge. The funnel never touched down and no damage was reported.

## GEORGIA, East Central

### **Burke County**

8 NNW Waynesboro to 15 1630EST 0.1 20 0 0 4.5K 0 Tornado (F0)  
8.1 NNW Waynesboro 1631EST

A small F0 briefly touched down at 153 Eagle Pass Court and destroyed 1 metal shed and did minor damage to 2 mobile homes.

### **Richmond County Augusta**

18 1300EST 0 0 0 Thunderstorm Wind (G50)

Emergency manager reported many powerlines and large branches down.

## GEORGIA, Lower

NONE REPORTED.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## GEORGIA, North and Central

GAZ001>009-011>016- Dade - Walker - Catoosa - Whitfield - Murray - Fannin - Gilmer - Union - Towns - Chattooga - Gordon -  
019>025-027-030>039- Pickens - Dawson - Lumpkin - White - Floyd - Bartow - Cherokee - Forsyth - Hall - Banks - Jackson -  
041>062-066>076- Madison - Polk - Paulding - Cobb - North Fulton - Gwinnett - Barrow - Clarke - Oconee - Oglethorpe -  
078>086-089>098- Wilkes - Haralson - Carroll - Douglas - South Fulton - De Kalb - Rockdale - Walton - Newton - Morgan -  
102>113 Greene - Taliaferro - Heard - Coweta - Fayette - Clayton - Spalding - Henry - Butts - Jasper - Putnam -  
Hancock - Warren - Troup - Meriwether - Pike - Upson - Lamar - Monroe - Jones - Baldwin - Washington -  
Glascok - Jefferson - Harris - Talbot - Taylor - Crawford - Bibb - Twiggs - Wilkinson - Johnson - Emanuel -  
Muscogee - Chattahoochee - Marion - Schley - Macon - Peach - Houston - Bleckley - Laurens - Treutlen -  
Stewart - Webster - Sumter - Dooley - Crisp - Pulaski - Wilcox - Dodge - Telfair - Wheeler - Montgomery -  
Toombs

03 1200EST 0 0 Very Warm  
12 2359EST

A strong ridge of high pressure aloft stagnated over the southeastern U.S. for several days during the first 11 days of September. Consequently, temperatures were unseasonably warm during the first part of September. Temperatures soared into the 90s across nearly all of north and central Georgia during this period. The hottest weather was broken into two periods, one from September 3rd to September 6th, and the second from September 9th through September 12th. Atlanta recorded a maximum of 95-degrees on the 4th, 10th, and 11th. Athens had 96 degrees on the 4th, 98 degrees on the 10th and 97 degrees on the 11th. Macon reported 96 degrees on the 10th and 97 degrees on the 11th. Columbus had 96 degrees on the 4th and 5th, 98 degrees on the 10th, and a sweltering 99 degrees on the 11th. The 95-degree reading in Atlanta on the 11th tied their record for this date and the 99-degree reading in Columbus on the 11th set a new record for the date, breaking their previous record of 97 degrees set in 1962.

### Polk County Cedartown

05 1644EST 0 0 Hail (0.75)  
The Polk county 911 center reported dime size hail.

### Polk County Cedartown

05 1644EST 0 0 0.50K Thunderstorm Wind  
The Polk county 911 center reported that a few trees were blown down.

### Walton County Walnut Grove

13 1858EST 0 0 Urban/Sml Stream Fld  
The Walton county 911 center reported that there was some minor street flooding.

### Carroll County Carrollton

13 2105EST 0 0 Urban/Sml Stream Fld  
The Carroll county 911 center reported that there was minor road flooding on U.S. Highway 27 at the WalMart.com facility.

GAZ001>009-011>016- Dade - Walker - Catoosa - Whitfield - Murray - Fannin - Gilmer - Union - Towns - Chattooga - Gordon -  
019>025-027-030>039- Pickens - Dawson - Lumpkin - White - Floyd - Bartow - Cherokee - Forsyth - Hall - Banks - Jackson -  
041>062-066>076- Madison - Polk - Paulding - Cobb - North Fulton - Gwinnett - Barrow - Clarke - Oconee - Oglethorpe -  
078>086-089>098- Wilkes - Haralson - Carroll - Douglas - South Fulton - De Kalb - Rockdale - Walton - Newton - Morgan -  
102>113 Greene - Taliaferro - Heard - Coweta - Fayette - Clayton - Spalding - Henry - Butts - Jasper - Putnam -  
Hancock - Warren - Troup - Meriwether - Pike - Upson - Lamar - Monroe - Jones - Baldwin - Washington -  
Glascok - Jefferson - Harris - Talbot - Taylor - Crawford - Bibb - Twiggs - Wilkinson - Johnson - Emanuel -  
Muscogee - Chattahoochee - Marion - Schley - Macon - Peach - Houston - Bleckley - Laurens - Treutlen -  
Stewart - Webster - Sumter - Dooley - Crisp - Pulaski - Wilcox - Dodge - Telfair - Wheeler - Montgomery -  
Toombs

14 1100EST 0 0 Tropical Storm  
15 0900EST

Tropical Storm Hanna moved inland near Mobile, Alabama around 5 pm EDT Saturday, September 14, 2002. The remnants of Hanna then moved northeast across central Alabama during the day Saturday and then across north Georgia Saturday evening into Sunday morning. The center of the remnants of Hanna passed near Carrollton, Georgia around 2 AM EDT Sunday morning, then exited the state near Clayton, Georgia Sunday morning, September 15th, around 10 am EDT. While the heaviest rain and wind associated with Hanna did not affect north and central Georgia area, a significant northwest-southeast oriented feeder band associated with Hanna moved across north and central Georgia during the mid and late afternoon Saturday. Wind gusts of 45 to 50 mph and very heavy tropical thunderstorms accompanied the feeder band. Numerous trees and power lines were blown down as the feeder band moved rapidly northeast through the afternoon. Many residents of north Georgia were left without power for at least a few hours. In the Atlanta metropolitan area alone, 48,000 residents were left without power. There were also scattered areas of urban and street flooding as up to 2 inches or more of rain fell in association with the feeder band in a one to two hour period. The heaviest rain fell across the counties north of a line from Atlanta to Athens. Additional rain fell across the region Saturday night and Sunday morning, but was considerably less intense, confined mainly to central Georgia, and was not accompanied with damaging winds. Three day rainfall totals in association with Hanna were in excess of 3 inches across much of northeast, east central, and the southern portions of middle Georgia. Athens reported 3.54 inches on September 14th alone, with a 3-day total of 5.03 inches. The average rainfall amount for north Georgia stations for the month was in excess of 7 inches, and was nearly 5

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## GEORGIA, North and Central

inches for middle Georgia. These rainfall amounts are approximately 3.5 and 1.5 inches above normal, respectively. Several stations, particularly in north Georgia had in excess of 10 inches of rain during the month, with 12.47 inches at Carrollton, 11.23 inches at Embry, 11.02 inches at Alto, 10.10 inches at Hiawassee, and 10.06 inches at Taylorsville. Despite the heavy rainfall, flooding problems were minimal, since north and central Georgia had been in a 4-year drought.

### Houston County Perry

14 1230EST 0 0 8K Tstm Wind/Hail

The Houston Home Journal of Perry reported that a large tree was blown down on a house causing considerable damage to the house. The front porch collapsed and there was considerable damage to the roof.

### Carroll County Mt Zion

14 1330EST 0 0 3K Thunderstorm Wind

The Carroll county Emergency Management Director reported that several trees were down, including some on power lines, in the Mt Zion area.

### Telfair County Helena

14 1330EST 0 0 2K Thunderstorm Wind

The Telfair county 911 center reported that several trees were down.

### Fayette County Starrs Mill to Peachtree City

14 1341EST 0 0 1K Thunderstorm Wind

The public reported two trees down near Starrs Mill, an off duty National Weather Service employee observed one tree down on Georgia Highway 85 north of Starrs Mill, and an amateur radio operator reported one tree down on Peachtree Parkway in Peachtree City.

### Coweta County 3 NE Sharpsburg

14 1345EST 0 0 45K Tstm Wind/Hail

The Times/Herald newspaper of Newnan reported that thunderstorm winds blew down a large oak tree at a residence along Georgia Highway 54 between Sharpsburg and Peachtree City. The downed tree severely damaged two cars and a house and also knocked down a power line. The power line started a fire which destroyed a third car.

### Haralson County 4 SW Buchanan

14 1435EST 0 0 1K Thunderstorm Wind

The Haralson county 911 center reported that four trees were down on Georgia Highway 120 midway between Buchanan and Tallapoosa.

### Paulding County Dallas to 6 S Yorkville

14 1450EST 0 0 5K Thunderstorm Wind

The Paulding county 911 center reported that several trees were down on power lines in Dallas and near Yorkville along Georgia Highway 101. The public reported that several trees were down on power lines along Georgia Highway 101 between Beulah and Union. Numerous power failures resulted, leaving one area near Union without power throughout the evening.

### Cobb County Countywide

14 1458EST 0 0 2K Thunderstorm Wind

The Cobb county 911 center reported that several trees and a couple of power lines were down across the county.

### Cherokee County Canton to Woodstock

14 1505EST 0 0 8K Thunderstorm Wind

The Cherokee county 911 center reported that numerous trees and power lines were down from Canton to Woodstock.

### Forsyth County 5 SW Cumming

14 1515EST 0 0 2K Tstm Wind/Hail

The public reported that a tree was blown down on a home causing some damage to the roof of the structure.

### Morgan County Madison

14 1515EST 0 0 0.50K Thunderstorm Wind

The Madisonian newspaper of Madison reported that thunderstorm winds blew down a large section of the trusses of a Senior Citizens Center that was under construction.

### Clarke County Athens

14 1530EST 0 0 Urban/Sml Stream Fld

The Athens Banner Herald reported that heavy rain, on the order of 2.3 inches in a one-hour period, resulted in brief flooding of some streets, including the intersection of Lumpkin and Baxter streets, Mitchell Bridge Road, and Atlanta Highway.

### Hall County Countywide

14 1530EST 0 0 15K Thunderstorm Wind

The Times newspaper of Gainesville reported that several trees and power lines were knocked down around the county because of high winds. A large oak tree fell on a home in Gainesville demolishing a sunroom and damaging the back of the house. Downed power lines resulted in the closure of a portion of Georgia Highway 60 in north Hall county until the lines could be repaired. At least 600 customers in the county were without power during the evening.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm   |
|--|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|----------------------|
| <b>GEORGIA, North and Central</b>  |      |                            |                           |                          |  |                                       |                      |
| <b>Lumpkin County</b>  |      |                            |                           |                          |  |                                       |                      |
| Countywide   | 14   | 1555EST<br>1610EST         |                           |                          | 0 0                                    | 2K                                    | Thunderstorm Wind    |
| The Lumpkin county 911 center reported scattered trees down in several areas around the county. The Amicalola Electric Membership Cooperative noted at least one tree down in the southern part of the county.   |      |                            |                           |                          |  |                                       |                      |
| <b>White County</b>  |      |                            |                           |                          |  |                                       |                      |
| Countywide   | 14   | 1600EST                    |                           |                          | 0 0                                    | 2K                                    | Thunderstorm Wind    |
| The White county 911 center reported scattered trees down in several areas around the county.  |      |                            |                           |                          |  |                                       |                      |
| <b>Gilmer County</b>   |      |                            |                           |                          |  |                                       |                      |
| 11 N Ellijay to<br>8 SSW Ellijay   | 14   | 1605EST                    |                           |                          | 0 0                                    | 2K                                    | Thunderstorm Wind    |
| The Amicalola Electric Membership Cooperative reported that at least nine trees were down in scattered areas around the northern and western part of the county.   |      |                            |                           |                          |  |                                       |                      |
| <b>Whitfield County</b>  |      |                            |                           |                          |  |                                       |                      |
| 2 W Cohutta to<br>6 E Cohutta  | 14   | 1615EST                    |                           |                          | 0 0                                    | 1K                                    | Thunderstorm Wind    |
| The Whitfield county 911 center reported that some trees were down across the northern part of the county.   |      |                            |                           |                          |  |                                       |                      |
| <b>Crisp County</b>  |      |                            |                           |                          |  |                                       |                      |
| Cordele  | 14   | 1630EST                    |                           |                          | 0 0                                    | 1K                                    | Tstm Wind/Hail       |
| The Cordele Dispatch reported that wind blew a tree down on a power line, causing one portion of a neighborhood to be without power for an hour.   |      |                            |                           |                          |  |                                       |                      |
| <b>Telfair County</b>  |      |                            |                           |                          |  |                                       |                      |
| 4 E Jacksonville   | 14   | 1640EST                    |                           |                          | 0 0                                    | 0.50K                                 | Thunderstorm Wind    |
| The Telfair county 911 center reported that two trees were blown down.   |      |                            |                           |                          |  |                                       |                      |
| <b>Laurens County</b>  |      |                            |                           |                          |  |                                       |                      |
| Countywide   | 14   | 1700EST                    |                           |                          | 0 0                                    | 2K                                    | Thunderstorm Wind    |
| The Courier Herald of Dublin reported that a few limbs, trees, and power lines were down in scattered areas around the county.   |      |                            |                           |                          |  |                                       |                      |
| <b>Morgan County</b>   |      |                            |                           |                          |  |                                       |                      |
| Madison  | 18   | 1600EST                    |                           |                          | 0 0                                    | 5K                                    | Urban/Sml Stream Fld |
| The Madisonian Newspaper of Madison reported that over three inches of rain fell in approximately 30 minutes resulting in the flooding of downtown streets. A motorist was stranded in his vehicle near the intersection of Main and Park Street as water rose up to the level of the windows. The motorist was safely removed from the flood waters, however the vehicle suffered extensive water damage.                                     |      |                            |                           |                          |  |                                       |                      |
| <b>Wilcox County</b>   |      |                            |                           |                          |  |                                       |                      |
| 5 N Abbeville  | 18   | 1708EST                    |                           |                          | 0 0                                    |                                       | Hail (0.88)          |
| WMAZ radio of Macon relayed a report of nickel size hail from the public.  |      |                            |                           |                          |  |                                       |                      |
| <b>Peach County</b>  |      |                            |                           |                          |  |                                       |                      |
| Ft Vly   | 18   | 1830EST                    |                           |                          | 0 0                                    |                                       | Urban/Sml Stream Fld |
| The Peach county Emergency Management Director reported that street flooding was occurring. Several vehicles were stalled in high water.   |      |                            |                           |                          |  |                                       |                      |
| <b>Dawson County</b>   |      |                            |                           |                          |  |                                       |                      |
| 7 SE Dawsonville   | 21   | 1530EST<br>1600EST         |                           |                          | 0 0                                    | 50K                                   | Flash Flood          |
| The Dawson county Emergency Management Director reported that very heavy rain, upwards of 2 inches in a 30 minute to one hour period washed out a road and six foot culvert to a subdivision in the southeastern portion of the county. This was the only road in/out of the subdivision. Hence, several families were stranded as a result. This water was part of the runoff into Toto Creek which eventually flows into Lake Sidney Lanier. |      |                            |                           |                          |  |                                       |                      |
| <b>Gwinnett County</b>   |      |                            |                           |                          |  |                                       |                      |
| Dacula   | 21   | 1715EST                    |                           |                          | 0 0                                    |                                       | Urban/Sml Stream Fld |
| The Gwinnett county Amateur Radio Emergency Services reported that Old Peachtree Road and Old Fountain Road were flooded. Several cars were stranded in the area because of the high water. In addition, water was up to the foundation of one home in the area.   |      |                            |                           |                          |  |                                       |                      |
| <b>Fulton County</b>   |      |                            |                           |                          |  |                                       |                      |
| 6 NE Atlanta to<br>2 SW Atlanta  | 21   | 1930EST                    |                           |                          | 0 0                                    |                                       | Urban/Sml Stream Fld |
| An amateur radio operator and Fox 5 News of Atlanta reported that there was street flooding and ponding of water in low-lying areas from downtown Atlanta to areas just southwest of downtown Atlanta.   |      |                            |                           |                          |  |                                       |                      |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## GEORGIA, North and Central

### Fulton County

2 SW Atlanta to  
College Park

21 2030EST  
2100EST 0 0 1.5M Flash Flood

The Fulton County Emergency Management Director reported that very heavy rain from a thunderstorm, moving southwest through the Atlanta metropolitan area, resulted in extensive flooding of homes and related property in the southwest Atlanta, East Point, and College Park areas. Rainfall in excess of 3 inches occurred in one hour or less throughout this area. The flooding was largely caused by clogged up drainage systems, trash, and other debris which collected along a fence which fell down as water pooled against it. Several homes were flooded as the result of this collapsed fence which acted much like a collapsed dam and a wall-of-water rushing downstream. Approximately 500 homes were flooded and damaged, with home damage apportioned as \$956,000 in Atlanta, \$134,435 in College Park, and \$130,000 in East Point. Thirty-seven of these homes were declared uninhabitable by the county inspector as water rose to more than 18 inches deep in the homes and above electrical outlets, rendering them unsafe to inhabit. Water rose up to eight feet deep in one home and 4-foot deep water was common. Up to 20 residents had to be rescued by boat. More than 75% of these homes sustained major damage, deemed as in excess of \$3500 damage, with the remaining 25% sustaining minor damage, deemed as in excess of \$2300 but less than \$3500 in damage. In addition to the damaged homes, at least a dozen cars were inundated and ruined in the flash flood and in excess of \$90,000 of city and county overtime fees were required for clean up and repair. The flash flooding also resulted in numerous stranded vehicles on Interstate-75 and Interstate-20 near downtown as well as other roads in the immediate areas surrounding downtown Atlanta. Illustrating the extent of the very heavy rainfall was a rise on Peachtree Creek on the north side of Atlanta from 3 feet to in excess of 17 feet in just a couple of hours. The Governor of Georgia declared the area as a disaster area and was able to provide \$1.2 million dollars of assistance to the residents affected.

### Baldwin County

Milledgeville

26 1600EST 0 0 2K Strong Wind

The Union Recorder of Milledgeville reported that strong winds, essentially associated with the remnants of Tropical Storm Isidore, blew an electrical pipe from the side of a home. The resultant sparking of the wires and the pipe against the wood siding of the house started a fire. The fire was put out in short order before much damage was done to the house.

GAZ001>009-011>016-  
019>022-024-030>034-  
041>045-052>053-  
066>067-078

Dade - Walker - Catoosa - Whitfield - Murray - Fannin - Gilmer - Union - Towns - Chattooga - Gordon - Pickens - Dawson - Lumpkin - White - Floyd - Bartow - Cherokee - Forsyth - Banks - Polk - Paulding - Cobb - North Fulton - Gwinnett - Haralson - Carroll - Douglas - South Fulton - De Kalb - Heard - Coweta - Troup - Meriwether - Harris

26 1800EST 0 0 21.5K Strong Wind  
27 0030EST

The remnants of Tropical Storm Isidore moved through Mississippi, western, and middle Tennessee from the evening of the 26th through the afternoon of the 27th. The storm had a large circulation. Thus, winds across northwest Georgia gusted into the 30 to 35 mph range as it passed by to the northwest of the state. With saturated soils across the region from recent heavy rainfall, several weak and small trees were blown down. Some of the trees fell down on power lines, and in some cases knocked the power lines down. The hardest hit areas were in far northwest Georgia, northwest of a line from Cedartown to Blue Ridge. Catoosa, Murray, Floyd, Gordon, and Whitfield counties all reported that a number of trees and/or power lines were down.

### Barrow County

Winder

27 0030EST 0 0 Urban/Sml Stream Fld

The Gwinnett Daily Post newspaper of Lawrenceville reported that significant flooding occurred to two offices, one housing the Gwinnett Daily Post Winder bureau and the other an Automation Packaging plant. The Gwinnett Daily Post suffered the most damage with standing water up to one foot deep in part of the building. A concrete slab, five inches thick, was floating in the water and 2,300 sections of paper and advertisements were soaked. Mud and other debris was also reported in the two buildings. The water was the result of runoff from a neighboring construction site and overnight heavy rain, associated with the remnants of Tropical Storm Isidore.

GAZ001>009-011>016-  
019>024-030>034-  
041>045-052>053-  
066>067-078

Dade - Walker - Catoosa - Whitfield - Murray - Fannin - Gilmer - Union - Towns - Chattooga - Gordon - Pickens - Dawson - Lumpkin - White - Floyd - Bartow - Cherokee - Forsyth - Hall - Banks - Polk - Paulding - Cobb - North Fulton - Gwinnett - Haralson - Carroll - Douglas - South Fulton - De Kalb - Heard - Coweta - Troup - Meriwether - Harris

27 0300EST 0 0 31.5K Strong Wind  
0700EST

As the remnants of Tropical Storm Isidore moved through middle Tennessee and the circulation center passed closest to northwest and north Georgia, a three to four hour period of gusty winds developed. Winds, gusting from 30 to 35 mph continued to blow down some trees, some of which fell on power lines. This was essentially the second surge of wind with Isidore, the first coming during the evening of the 26th was apparently associated with a feeder band. This time, however, the brunt of the wind damage occurred in northeast Georgia, particularly in the higher elevations. The areas from Ellijay in Gilmer county to Blairsville in Union county were among the hardest hit. Numerous trees and power lines were blown down in Gilmer county. Georgia Highway 5 was blocked north of Ellijay. In Union county, nearly two dozen trees were blown down, one of which caused damage to a house.

# Storm Data and Unusual Weather Phenomena

September 2002

|   |  |  |                           |                          |                                |                                 |                                 |       | September 2002                 |
|---|--|--|---------------------------|--------------------------|--------------------------------|---------------------------------|---------------------------------|-------|--------------------------------|
| Location  | Date   | Time<br>Local/<br>Standard   | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed | Number of<br>Persons<br>Injured | Estimated<br>Damage<br>Property | Crops | Character of Storm             |
| <b><u>GEORGIA, Northeast</u></b>                      |  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>Franklin County</b>                                |  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>Carnesville</b>                                    | <b>14</b>  | <b>1555EST</b>   |                           |                          | <b>0</b>                       | <b>0</b>                        |                                 |       | <b>Thunderstorm Wind (G50)</b> |
|   | A few trees were blown down.   |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>Elbert County</b>                                  |  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>5 SE Elberton</b>                                  | <b>14</b>  | <b>1620EST</b>   |                           |                          | <b>0</b>                       | <b>0</b>                        |                                 |       | <b>Thunderstorm Wind (G50)</b> |
|   | Some trees were blown down.  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>Habersham County</b>                               |  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>Hollywood</b>                                      | <b>14</b>  | <b>1630EST</b>   |                           |                          | <b>0</b>                       | <b>0</b>                        |                                 |       | <b>Thunderstorm Wind (G50)</b> |
|   | Some trees were blown down.  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>Habersham County</b>                               |  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>Batesville</b>                                     | <b>14</b>  | <b>1630EST</b>   |                           |                          | <b>0</b>                       | <b>0</b>                        |                                 |       | <b>Thunderstorm Wind (G50)</b> |
|   | Some trees were blown down.  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>Stephens County</b>                                |  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>8 N Toccoa</b>                                     | <b>14</b>  | <b>1640EST</b>   |                           |                          | <b>0</b>                       | <b>0</b>                        |                                 |       | <b>Thunderstorm Wind (G50)</b> |
|   | Some trees and a power line were blown down at Yonah Lake.   |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>Rabun County</b>                                   |  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>10 W Clayton</b>                                   | <b>14</b>  | <b>1730EST</b>   |                           |                          | <b>0</b>                       | <b>0</b>                        |                                 |       | <b>Thunderstorm Wind (G50)</b> |
|   | Some trees were blown down near Highway 197.   |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>GAZ017</b>   |  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>to</b>   | <b>15</b>  | <b>1115EST</b>   |                           |                          | <b>0</b>                       | <b>0</b>                        |                                 |       | <b>Flood</b>                   |
| <b>Cornelia</b>                                       |  | <b>1400EST</b>   |                           |                          |                                |                                 |                                 |       |                                |
|   | Some streams were overflowing their banks.   |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>GAZ028</b>   |  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>to</b>   | <b>15</b>  | <b>1400EST</b>   |                           |                          | <b>0</b>                       | <b>0</b>                        |                                 |       | <b>Flood</b>                   |
| <b>Hartwell</b>                                       |  | <b>1430EST</b>   |                           |                          |                                |                                 |                                 |       |                                |
|   | A creek flooded Flat Shoals Rd in Hartwell.  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>GAZ010-017</b>                                     |  |  |                           |                          |                                |                                 |                                 |       |                                |
|   |  | <b>Rabun - Habersham</b>   |                           |                          |                                |                                 |                                 |       |                                |
|   | <b>26</b>  | <b>2100EST</b>   |                           |                          | <b>0</b>                       | <b>0</b>                        |                                 |       | <b>Gusty Winds</b>             |
|   | <b>27</b>  | <b>1400EST</b>   |                           |                          |                                |                                 |                                 |       |                                |
|   | Strong winds developed over the mountains of northeast Georgia, as the remnants of tropical storm Isidore passed over the Tennessee and Ohio valleys. The combination of wind and wet soil from heavy rainfall resulted in some fallen trees and power lines in scattered locations.     |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>GAZ010</b>   |  |  |                           |                          |                                |                                 |                                 |       |                                |
|   |  | <b>Rabun</b>   |                           |                          |                                |                                 |                                 |       |                                |
|   | <b>27</b>  | <b>0300EST</b>   |                           |                          | <b>0</b>                       | <b>0</b>                        |                                 |       | <b>High Wind (G50)</b>         |
|   |  | <b>1100EST</b>   |                           |                          |                                |                                 |                                 |       |                                |
|   | Winds associated with Isidore increased during the early morning, resulting in more widespread damage to trees and power lines. Widespread power outages were also reported.   |  |                           |                          |                                |                                 |                                 |       |                                |
| <b><u>GEORGIA, Southeast</u></b>                      |  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>GAZ087&gt;088-099&gt;101-114&gt;119-137&gt;141</b> |  |  |                           |                          |                                |                                 |                                 |       |                                |
|   |  | <b>Jenkins - Screven - Candler - Bulloch - Effingham - Tattnall - Evans - Inland Bryan - Coastal Bryan - Inland Chatham - Coastal Chatham - Long - Inland Liberty - Coastal Liberty - Inland McIntosh - Coastal McIntosh</b> |                           |                          |                                |                                 |                                 |       |                                |
|   | <b>01</b>  | <b>0000EST</b>   |                           |                          | <b>0</b>                       | <b>0</b>                        |                                 |       | <b>Drought</b>                 |
|   | <b>30</b>  | <b>2359EST</b>   |                           |                          |                                |                                 |                                 |       |                                |
|   | Mild to moderate drought conditions were over southeast Georgia for most of the month. Several rain producing systems along with nearby tropical storms produced enough rainfall to improve the long term drought conditions that have scorched the region for the past couple of years. |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>Jenkins County</b>                                 |  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>Millen</b>   | <b>18</b>  | <b>1545EST</b>   |                           |                          | <b>0</b>                       | <b>0</b>                        |                                 |       | <b>Thunderstorm Wind (G50)</b> |
|   | Several farm buildings were destroyed. Also, several large limbs and power lines were down.  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>Bulloch County</b>                                 |  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>Statesboro</b>                                     | <b>18</b>  | <b>1749EST</b>   |                           |                          | <b>0</b>                       | <b>0</b>                        |                                 |       | <b>Flood</b>                   |
|   |  | <b>1830EST</b>   |                           |                          |                                |                                 |                                 |       |                                |
| <b>Bulloch County</b>                                 |  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>Brooklet</b>                                       | <b>18</b>  | <b>1810EST</b>   |                           |                          | <b>0</b>                       | <b>0</b>                        |                                 |       | <b>Flood</b>                   |
|   |  | <b>1830EST</b>   |                           |                          |                                |                                 |                                 |       |                                |
| <b>Evans County</b>                                   |  |  |                           |                          |                                |                                 |                                 |       |                                |
| <b>Claxton to Hagan</b>                               | <b>18</b>  | <b>1900EST</b>   |                           |                          | <b>0</b>                       | <b>0</b>                        |                                 |       | <b>Flood</b>                   |
|   |  | <b>1930EST</b>   |                           |                          |                                |                                 |                                 |       |                                |
|   | Three to five inches of rain fell across Evans and Bulloch Counties during the late afternoon early evening time frame. As a result, flooding occurred in several areas where roads were covered with a couple feet of water which caused cars to stall.                                 |  |                           |                          |                                |                                 |                                 |       |                                |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002  |          |                            |                           |                          |                      |   |                     |       |                    |
|---|----------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|-------|--------------------|
| Location  | Date     | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage | Crops | Character of Storm |
| <b>GEORGIA, Southwest</b>   |          |                            |                           |                          |                      |   |                     |       |                    |
| <b>Grady County</b>   |          |                            |                           |                          |                      |   |                     |       |                    |
| Countywide  | 14       | 1100EST<br>1400EST         |                           |                          | 0                    | 0 | 10K                 |       | Flash Flood        |
| Three to five inches of rain caused flooding of several county roads, with some street flooding in Cairo. Reported by 911.  |          |                            |                           |                          |                      |   |                     |       |                    |
| <b>Thomas County</b>  |          |                            |                           |                          |                      |   |                     |       |                    |
| Countywide  | 14       | 1200EST<br>1500EST         |                           |                          | 0                    | 0 | 15K                 |       | Flood              |
| Up to four inches of rain caused some minor rural and urban flooding. In Thomasville, gusty winds and saturated grounds downed some trees into power lines, which blocked streets and disrupted power. Reported by the Thomasville Times Enterprise.  |          |                            |                           |                          |                      |   |                     |       |                    |
| <b>Seminole County</b>  |          |                            |                           |                          |                      |   |                     |       |                    |
| Countywide  | 15       | 0030EST<br>0600EST         |                           |                          | 0                    | 0 | 5M                  | 2M    | Flash Flood        |
| Between 10 and 15 inches of rain fell during a seven-hour period over much of the county. Donalsonville received 14.59 inches between 1030 pm Saturday and 530 am Sunday, and 15.74 inches during a 24-hour period. An estimated 300 homes and 75 businesses in and surrounding Donalsonville were damaged by flood waters. Portions of U.S. Highway 84, and State Roads 45 and 285 were closed. A wooden bridge on the southwest side of Donalsonville was destroyed. An estimated 5,000 acres of peanuts and cotton were destroyed. A disaster center served nearly 600 flood victims. Reported by the Seminole County EMA.   |          |                            |                           |                          |                      |   |                     |       |                    |
| <b>Early County</b>   |          |                            |                           |                          |                      |   |                     |       |                    |
| Countywide  | 15       | 0130EST<br>0600EST         |                           |                          | 0                    | 0 | 50K                 |       | Flash Flood        |
| Between six and ten inches of rain flooded several county roads. Many roads in Blakely were under water. Reported by the Early County EMA.  |          |                            |                           |                          |                      |   |                     |       |                    |
| <b>Miller County</b>  |          |                            |                           |                          |                      |   |                     |       |                    |
| Countywide  | 15       | 0200EST<br>0600EST         |                           |                          | 0                    | 0 | 500K                |       | Flash Flood        |
| Up to eight inches of rain flooded several county and state roads. Many homes near Colquitt were evacuated due to rising water. 35 homes and three businesses suffered water damage, as well as the Colquitt Police Department and county courthouse. Reported by the Miller County EMA.  |          |                            |                           |                          |                      |   |                     |       |                    |
| <b>Decatur County</b>   |          |                            |                           |                          |                      |   |                     |       |                    |
| Countywide  | 15       | 0300EST<br>0700EST         |                           |                          | 0                    | 0 | 50K                 | 150K  | Flash Flood        |
| Up to six inches of rain washed out a few county roads, with several closed to rising water. Over 500 acres of peanuts were damaged by flood waters. Reported by the Decatur County EMA.  |          |                            |                           |                          |                      |   |                     |       |                    |
| <b>Colquitt County</b>  |          |                            |                           |                          |                      |   |                     |       |                    |
| Countywide  | 15       | 0500EST<br>1000EST         |                           |                          | 0                    | 0 | 10K                 | 50K   | Flood              |
| Between two and six inches of rain caused minor street flooding in Moultrie. A few hundred acres of peanut and cotton crops were damaged. Reported by the Moultrie Observer.  |          |                            |                           |                          |                      |   |                     |       |                    |
| <b>GAZ142&gt;143-146-155&gt;158</b>   |          |                            |                           |                          |                      |   |                     |       |                    |
| <b>Early - Miller - Colquitt - Seminole - Decatur - Grady - Thomas</b>  |          |                            |                           |                          |                      |   |                     |       |                    |
|   | 14<br>16 | 1800EST<br>0300EST         |                           |                          | 0                    | 0 | 5.7M                | 2.2M  | Tropical Storm     |
| The remnants of Tropical Storm Hanna produced torrential rains that caused severe localized flooding, as well as scattered wind damage across portions of southwest Georgia. Decatur, Miller and Seminole counties were each declared a state of emergency due to major flood damage of numerous homes, businesses and roads, as well as power outages from fallen trees. Rainfall totals ranged from four to eight inches over Decatur County to nearly 16 inches in Seminole County. In a 24-hour period ending at 7 am September 15, nearly 16 inches of rain fell in Donalsonville, GA, which flooded numerous homes and businesses. Thunderstorm winds blew a roof off a house and damaged a few mobiles homes in Donalsonville. Runoff from the torrential rain caused minor flooding at Spring Creek near Iron City, GA, where the creek crested 1.3 feet above flood stage on September 17. |          |                            |                           |                          |                      |   |                     |       |                    |
| <b>Seminole County</b>  |          |                            |                           |                          |                      |   |                     |       |                    |
| Donalsonville   | 15       | 0415EST                    |                           |                          | 0                    | 0 | 100K                |       | Thunderstorm Wind  |
| A roof was blown off a house. A peanut shed and two mobile homes were damaged. Reported by the Seminole County EMA.   |          |                            |                           |                          |                      |   |                     |       |                    |
| <b>GULF OF MEXICO</b>   |          |                            |                           |                          |                      |   |                     |       |                    |
| <b>W End Of The 7 Mile Bridge To Key W Out 20Nm</b>   |          |                            |                           |                          |                      |   |                     |       |                    |
| 3 SE Key West   | 01       | 0751EST<br>0756EST         |                           |                          | 0                    | 0 |                     |       | Waterspout         |
| Waterspout observed 3 miles southeast of Key West International Airport.  |          |                            |                           |                          |                      |   |                     |       |                    |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002  |      |                            |                           |                          |                      |         |                     |       |                    |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|   |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b><u>GULF OF MEXICO</u></b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Gulf Side Of The</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Lower Keys Out 20Nm</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| 4 N Key West  | 02   | 1115EST                    |                           |                          | 0                    | 0       |                     |       | Waterspout         |
| Waterspout observed by US Navy personel 3 miles north of Sigsbee Key.                               |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Gulf Side Of The</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Lower Keys Out 20Nm</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| 5 NE Key West   | 02   | 1115EST                    |                           |                          | 0                    | 0       |                     |       | Waterspout         |
| Waterspout observed by Key West Naval Air Station weather observer 2 miles north of Boca Chica Key. |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Pascagoula Ms To Sw</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Pass Of Ms R Out</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>20Nm</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| 22 SSE Biloxi   | 06   | 1230CST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Pascagoula Ms To Sw</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Pass Of Ms R 20 To</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>60Nm</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| 45 E Venice   | 06   | 1351CST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Key W To Dry</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Tortugas Waters</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Dry Tortugas  | 06   | 1457EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Wind gust 41 knots (47 mph) recorded at Dry Tortugas CMAN.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Pascagoula Ms To Sw</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Pass Of Ms R Out</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>20Nm</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| 22 SSE Biloxi   | 06   | 1534CST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Key W To Dry</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Tortugas Waters</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| 15 N Boca Grande  | 06   | 1636EST                    |                           |                          | 0                    | 0       |                     |       | Waterspout         |
| Two waterspouts observed 18 miles north-northwest of Key West.                                      |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Mobile Bay</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Alabama Port  | 06   | 1700CST<br>1705CST         |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Pensacola Fl To</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Pascagoula Ms Out</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>20Nm</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Dauphin Island  | 06   | 1705CST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Tampa Bay</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Middle Tampa Bay  | 06   | 1706EST<br>1715EST         |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Wind measured by the ASOS at the Albert Whitted Airport in St. Petersburg.                          |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Englewood To Tarpon</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Springs Fl Out 20Nm</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| 7 S Clearwater Beach  | 06   | 1732EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Wind measured by a TV weather spotter between Seminole and Indian Rocks.                            |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Sw Pass Of The Ms R</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>To Atchafalaya R La</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Out 20Nm</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| 20 S Venice   | 07   | 0214CST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Pascagoula Ms To Sw</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Pass Of Ms R Out</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>20Nm</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| 22 SSE Biloxi   | 07   | 0549CST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Pascagoula Ms To Sw</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Pass Of Ms R Out</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>20Nm</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| 22 SSE Biloxi   | 07   | 0609CST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |      |                            |                           |                          |                      |         |                     |       |                    |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b><u>GULF OF MEXICO</u></b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Pensacola Fl To<br/>Pascagoula Ms Out<br/>20Nm</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Dauphin Island   | 07   | 1000CST<br>1005CST         |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Pensacola Fl To<br/>Pascagoula Ms Out<br/>20Nm</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| 10 SE Dauphin Island   | 07   | 1525CST<br>1530CST         |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Corpus Christi To<br/>Baffin Bay</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Baffin Bay   | 08   | 0247CST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Matagorda Ship Chnl<br/>To Pt Aransas Out<br/>20Nm</b>                                    |      |                            |                           |                          |                      |         |                     |       |                    |
| Port Aransas   | 08   | 0247CST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Matagorda Ship Chnl<br/>To Pt Aransas Tx 20<br/>To 60Nm</b>                               |      |                            |                           |                          |                      |         |                     |       |                    |
| Port O'Connor  | 08   | 0247CST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Pt Aransas To Baffin<br/>Bay Tx 20 To 60Nm</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Port Aransas   | 08   | 0247CST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Gulf Side Of The<br/>Lower Keys Out 20Nm</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| 6 N Key West   | 08   | 1704EST<br>1712EST         |                           |                          | 0                    | 0       |                     |       | Waterspout         |
| Waterspout observed 6 miles north of Key West International Airport.                         |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Craig Key To The W<br/>End Of The 7 Mile<br/>Bridge Out 20Nm</b>                          |      |                            |                           |                          |                      |         |                     |       |                    |
| 5 S Marathon   | 09   | 2146EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Wind gust 39 knots (45 mph) recorded at Sombrero Key CMAN (anemometer height 158 feet AMSL). |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Craig Key To The W<br/>End Of The 7 Mile<br/>Bridge Out 20Nm</b>                          |      |                            |                           |                          |                      |         |                     |       |                    |
| 5 S Marathon   | 10   | 1400EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Wind gust 34 knots (39 mph) recorded at Sombrero Key CMAN (anemometer height 158 feet AMSL). |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Ocean Reef To Craig<br/>Key Fl Out 20Nm</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| 7 S Key Largo  | 10   | 1757EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Wind gust 35 knots (40 mph) recorded at Molasses Reef CMAN.                                  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Ocean Reef To Craig<br/>Key Fl Out 20Nm</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| 7 S Key Largo  | 10   | 1809EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Wind gust 35 knots (40 mph) recorded at Molasses Reef CMAN.                                  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Key W To Dry<br/>Tortugas Waters</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Dry Tortugas   | 11   | 0837EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Wind gust 38 knots (44 mph) recorded at Dry Tortugas CMAN.                                   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Key W To Dry<br/>Tortugas Waters</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Dry Tortugas   | 11   | 1546EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Wind gust 36 knots (41 mph) recorded at Dry Tortugas CMAN.                                   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Gulf Side Of The<br/>Lower Keys Out 20Nm</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Key West   | 11   | 1914EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Wind gust 38 knots (44 mph) recorded at Key West International Airport.                      |      |                            |                           |                          |                      |         |                     |       |                    |

# Storm Data and Unusual Weather Phenomena

September 2002

|   |      |                            |                           |                          |                      |   |                     |          |       | September 2002     |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|----------|-------|--------------------|
| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage | Property | Crops | Character of Storm |
| <b><u>GULF OF MEXICO</u></b>  |      |                            |                           |                          |                      |   |                     |          |       |                    |
| <b>W End Of The 7 Mile<br/>Bridge To Key W Out<br/>20Nm</b>   |      |                            |                           |                          |                      |   |                     |          |       |                    |
| Key West  | 11   | 1914EST                    |                           |                          | 0                    | 0 |                     |          |       | Marine Tstm Wind   |
| Wind gust 38 knots (44 mph) recorded at Key West International Airport.   |      |                            |                           |                          |                      |   |                     |          |       |                    |
| <b>Ocean Reef To Craig<br/>Key Fl Out 20Nm</b>  |      |                            |                           |                          |                      |   |                     |          |       |                    |
| 7 S Key Largo   | 11   | 2124EST                    |                           |                          | 0                    | 0 |                     |          |       | Marine Tstm Wind   |
| Wind gust 42 knots (48 mph) recorded at Molasses Reef CMAN.   |      |                            |                           |                          |                      |   |                     |          |       |                    |
| <b>Craig Key To The W<br/>End Of The 7 Mile<br/>Bridge Out 20Nm</b>   |      |                            |                           |                          |                      |   |                     |          |       |                    |
| 1 SW Duck Key   | 15   | 0830EST                    |                           |                          | 0                    | 0 |                     |          |       | Waterspout         |
| Waterspout observed 1 mile southeast of Grassy Key.   |      |                            |                           |                          |                      |   |                     |          |       |                    |
| <b>Key W To Dry<br/>Tortugas Waters</b>   |      |                            |                           |                          |                      |   |                     |          |       |                    |
| 4 SSE Boca Grande   | 17   | 1714EST<br>1720EST         |                           |                          | 0                    | 0 |                     |          |       | Waterspout         |
| Large waterspout observed 8 miles west southwest of Key West.   |      |                            |                           |                          |                      |   |                     |          |       |                    |
| <b>Key W To Dry<br/>Tortugas Waters</b>   |      |                            |                           |                          |                      |   |                     |          |       |                    |
| 6 ENE Boca Grande   | 17   | 1720EST<br>1728EST         |                           |                          | 0                    | 0 |                     |          |       | Waterspout         |
| Large waterspout observed 3 miles west northwest of Key West.   |      |                            |                           |                          |                      |   |                     |          |       |                    |
| <b>Key W To Dry<br/>Tortugas Waters</b>   |      |                            |                           |                          |                      |   |                     |          |       |                    |
| 7 NE Boca Grande  | 17   | 1738EST<br>1742EST         |                           |                          | 0                    | 0 |                     |          |       | Waterspout         |
| Large waterspout observed 3 miles northwest of Key West.  |      |                            |                           |                          |                      |   |                     |          |       |                    |
| <b>Destin To Pensacola Fl<br/>Out 20Nm</b>  |      |                            |                           |                          |                      |   |                     |          |       |                    |
| Pensacola Beach   | 18   | 1030CST<br>1035CST         |                           |                          | 0                    | 0 |                     |          |       | Waterspout         |
| A waterspout was observed just offshore of Pensacola Beach. The spout remained offshore and dissipated over the water.  |      |                            |                           |                          |                      |   |                     |          |       |                    |
| <b>Chokoloskee To Bonita<br/>Beach Fl 20 To 60Nm</b>  |      |                            |                           |                          |                      |   |                     |          |       |                    |
| 2 S Marco Island  | 18   | 1640EST                    |                           |                          | 0                    | 0 |                     |          |       | Waterspout         |
| The public reported a waterspout in the Gulf of Mexico just offshore Marco Island.  |      |                            |                           |                          |                      |   |                     |          |       |                    |
| <b>Mobile Bay</b>   |      |                            |                           |                          |                      |   |                     |          |       |                    |
| Alabama Port  | 19   | 0605CST<br>0615CST         |                           |                          | 0                    | 0 |                     |          |       | Waterspout         |
| The Coast Guard reported a waterspout near Billy Goat Hole. The spout remained over the Bay and lasted for several minutes before dissipating after moving east toward Fort Morgan. |      |                            |                           |                          |                      |   |                     |          |       |                    |
| <b>Galveston Bay</b>  |      |                            |                           |                          |                      |   |                     |          |       |                    |
| 12 SE Texas City  | 19   | 0900CST                    |                           |                          | 0                    | 0 |                     |          |       | Marine Tstm Wind   |
| Measured at South Jetty.  |      |                            |                           |                          |                      |   |                     |          |       |                    |
| <b>High Is To Freeport Tx<br/>Out 20Nm</b>  |      |                            |                           |                          |                      |   |                     |          |       |                    |
| 1 S Galveston   | 19   | 0900CST                    |                           |                          | 0                    | 0 |                     |          |       | Marine Tstm Wind   |
| Measured at Pleasure Pier   |      |                            |                           |                          |                      |   |                     |          |       |                    |
| <b>Craig Key To The W<br/>End Of The 7 Mile<br/>Bridge 20 To 60Nm</b>   |      |                            |                           |                          |                      |   |                     |          |       |                    |
| 5 S Marathon  | 19   | 1907EST                    |                           |                          | 0                    | 0 |                     |          |       | Marine Tstm Wind   |
| Wind gust 40 knots (46 mph) recorded at Sombrero Key CMAN (anemometer height 158 feet AMSL).  |      |                            |                           |                          |                      |   |                     |          |       |                    |
| <b>Ocean Reef To Craig<br/>Key Fl 20 To 60Nm</b>  |      |                            |                           |                          |                      |   |                     |          |       |                    |
| 18 SE Key Largo   | 19   | 2000EST                    |                           |                          | 0                    | 0 |                     |          |       | Marine Tstm Wind   |
| Wind gust 42 knots (48 mph) recorded on cruise ship Explorer of the Seas.   |      |                            |                           |                          |                      |   |                     |          |       |                    |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |         |                            |                           |                          |                      |   |                     |  |                    |
|--|---------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|--|--------------------|
| Location   | Date    | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |  | Character of Storm |
| Killed   | Injured | Property                   | Crops                     |                          |                      |   |                     |  |                    |
| <b><u>GULF OF MEXICO</u></b>   |         |                            |                           |                          |                      |   |                     |  |                    |
| <b>Matagorda Ship Chnl<br/>To Pt Aransas Out<br/>20Nm</b>                                    |         |                            |                           |                          |                      |   |                     |  |                    |
| Port Aransas   | 19      | 2005CST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Pt O'Connor To<br/>Aransas Pass</b>   |         |                            |                           |                          |                      |   |                     |  |                    |
| Port O'Connor  | 19      | 2005CST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Corpus Christi To<br/>Baffin Bay</b>  |         |                            |                           |                          |                      |   |                     |  |                    |
| Port Aransas   | 19      | 2029CST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Pt Aransas To Baffin<br/>Bay Tx Out 20Nm</b>  |         |                            |                           |                          |                      |   |                     |  |                    |
| Baffin Bay   | 19      | 2029CST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Craig Key To The W<br/>End Of The 7 Mile<br/>Bridge Out 20Nm</b>                          |         |                            |                           |                          |                      |   |                     |  |                    |
| 5 S Marathon   | 20      | 0317EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind gust 37 knots (43 mph) recorded at Sombrero Key CMAN (anemometer height 158 feet AMSL). |         |                            |                           |                          |                      |   |                     |  |                    |
| <b>Matagorda Ship Chnl<br/>To Pt Aransas Tx 20<br/>To 60Nm</b>                               |         |                            |                           |                          |                      |   |                     |  |                    |
| Port Aransas to<br>Port O'Connor   | 20      | 1100CST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Pt Aransas To Baffin<br/>Bay Tx 20 To 60Nm</b>  |         |                            |                           |                          |                      |   |                     |  |                    |
| Baffin Bay to<br>Port Aransas  | 20      | 1100CST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Key W To Dry<br/>Tortugas Waters</b>  |         |                            |                           |                          |                      |   |                     |  |                    |
| 8 SE Boca Grande   | 20      | 1406EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind gust 35 knots (40 mph) recorded at Sand Key CMAN.                                       |         |                            |                           |                          |                      |   |                     |  |                    |
| <b>Gulf Side Of The<br/>Lower Keys Out 20Nm</b>  |         |                            |                           |                          |                      |   |                     |  |                    |
| Key West   | 20      | 1410EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind gust 34 knots (39 mph) recorded at Key West International Airport.                      |         |                            |                           |                          |                      |   |                     |  |                    |
| <b>W End Of The 7 Mile<br/>Bridge To Key W Out<br/>20Nm</b>                                  |         |                            |                           |                          |                      |   |                     |  |                    |
| Key West   | 20      | 1410EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind gust 34 knots (39 mph) recorded at Key West International Airport.                      |         |                            |                           |                          |                      |   |                     |  |                    |
| <b>Englewood To Tarpon<br/>Springs Fl Out 20Nm</b>   |         |                            |                           |                          |                      |   |                     |  |                    |
| 5 NW Longboat Key  | 20      | 1555EST<br>1605EST         |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind measured by a trained storm spotter on Bradenton Beach.                                 |         |                            |                           |                          |                      |   |                     |  |                    |
| <b>Tampa Bay<br/>Middle Tampa Bay</b>  |         |                            |                           |                          |                      |   |                     |  |                    |
|  | 20      | 1622EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Measure by the ASOS at the Albert Whitted Airport in St. Petersburg.                         |         |                            |                           |                          |                      |   |                     |  |                    |
| <b>Key W To Dry<br/>Tortugas Waters</b>  |         |                            |                           |                          |                      |   |                     |  |                    |
| 8 SE Boca Grande   | 20      | 1645EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind gust 38 knots (44 mph) recorded at Sand Key CMAN.                                       |         |                            |                           |                          |                      |   |                     |  |                    |
| <b>Gulf Side Of The<br/>Lower Keys Out 20Nm</b>  |         |                            |                           |                          |                      |   |                     |  |                    |
| Key West   | 20      | 1648EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind gust 35 knots (40 mph) measured at Key West International Airport.                      |         |                            |                           |                          |                      |   |                     |  |                    |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |  | Character of Storm |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|--|--------------------|
| S  |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>GULF OF MEXICO</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>W End Of The 7 Mile<br/>Bridge To Key W Out<br/>20Nm</b>                                  |      |                            |                           |                          |                      |   |                     |  |                    |
| Key West   | 20   | 1648EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind gust 35 knots (40 mph) recorded at Key West International Airport.                      |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Craig Key To The W<br/>End Of The 7 Mile<br/>Bridge Out 20Nm</b>                          |      |                            |                           |                          |                      |   |                     |  |                    |
| 5 S Marathon   | 20   | 1649EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind gust 35 knots (40 mph) recorded at Sombrero Key CMAN (anemometer height 158 feet AMSL). |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Tampa Bay</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Old Tampa Bay  | 20   | 1649EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind measured by the ASOS at the St. Petersburg/Clearwater airport.                          |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Craig Key To The W<br/>End Of The 7 Mile<br/>Bridge 20 To 60Nm</b>                        |      |                            |                           |                          |                      |   |                     |  |                    |
| 5 S Marathon   | 20   | 2201EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind gust 34 knots (39 mph) recorded at Sombrero Key CMAN (anemometer height 158 feet AMSL). |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Ocean Reef To Craig<br/>Key Fl Out 20Nm</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| 7 S Key Largo  | 20   | 2226EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind gust 35 knots (40 mph) recorded at Molasses Reef CMAN.                                  |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Key W To Dry<br/>Tortugas Waters</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Dry Tortugas   | 20   | 2246EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind gust 34 knots (39 mph) recorded at Dry Tortugas CMAN.                                   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Florida Bay</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Flamingo   | 21   | 0006EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind gust 37 knots (43 mph) recorded at Flamingo HANDAR station.                             |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Key W To Dry<br/>Tortugas Waters</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Dry Tortugas   | 21   | 1232EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind gust 34 knots (39 mph) recorded at Dry Tortugas CMAN.                                   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Key W To Dry<br/>Tortugas Waters</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Dry Tortugas   | 22   | 0256EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind gust 36 knots (41 mph) recorded at Dry Tortugas CMAN.                                   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Sw Pass Of The Ms R<br/>To Atchafalaya R La<br/>Out 20Nm</b>                              |      |                            |                           |                          |                      |   |                     |  |                    |
| 20 S Venice  | 22   | 0711CST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Pascagoula Ms To Sw<br/>Pass Of Ms R Out<br/>20Nm</b>                                     |      |                            |                           |                          |                      |   |                     |  |                    |
| 22 SSE Biloxi  | 22   | 1528CST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Pascagoula Ms To Sw<br/>Pass Of Ms R Out<br/>20Nm</b>                                     |      |                            |                           |                          |                      |   |                     |  |                    |
| 22 SSE Biloxi  | 22   | 1626CST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Pascagoula Ms To Sw<br/>Pass Of Ms R Out<br/>20Nm</b>                                     |      |                            |                           |                          |                      |   |                     |  |                    |
| 22 SSE Biloxi  | 22   | 1652CST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Sw Pass Of The Ms R<br/>To Atchafalaya R La<br/>Out 20Nm</b>                              |      |                            |                           |                          |                      |   |                     |  |                    |
| Grand Isle   | 22   | 1731CST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002  |         |                            |                           |                          |                      |   |                     |  |                    |
|---|---------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|--|--------------------|
| Location  | Date    | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |  | Character of Storm |
| Killed  | Injured | Property                   | Crops                     |                          |                      |   |                     |  |                    |
| <b><u>GULF OF MEXICO</u></b>  |         |                            |                           |                          |                      |   |                     |  |                    |
| <b>Sw Pass Of The Ms R<br/>To Atchafalaya R La<br/>Out 20Nm</b>   |         |                            |                           |                          |                      |   |                     |  |                    |
| 20 S Venice   | 22      | 1747CST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Sw Pass Of The Ms R<br/>To Atchafalaya R La<br/>Out 20Nm</b>   |         |                            |                           |                          |                      |   |                     |  |                    |
| Grand Isle  | 22      | 1805CST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Sw Pass Of The Ms R<br/>To Atchafalaya R La<br/>Out 20Nm</b>   |         |                            |                           |                          |                      |   |                     |  |                    |
| 20 S Venice   | 22      | 1833CST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Sw Pass Of The Ms R<br/>To Atchafalaya R La<br/>Out 20Nm</b>   |         |                            |                           |                          |                      |   |                     |  |                    |
| 20 S Venice   | 22      | 1901CST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Freeport To<br/>Matagorda Ship Chnl<br/>Out 20Nm</b>   |         |                            |                           |                          |                      |   |                     |  |                    |
| 60 S Freeport   | 22      | 2000CST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Measured at 42019.  |         |                            |                           |                          |                      |   |                     |  |                    |
| <b>W End Of The 7 Mile<br/>Bridge To Key W Out<br/>20Nm</b>   |         |                            |                           |                          |                      |   |                     |  |                    |
| 7 SW Key West   | 24      | 2135EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind gust 38 knots (44 mph) recorded at Sand Key CMAN.  |         |                            |                           |                          |                      |   |                     |  |                    |
| <b>Pensacola Fl To<br/>Pascagoula Ms Out<br/>20Nm</b>   |         |                            |                           |                          |                      |   |                     |  |                    |
| Dauphin Island  | 25      | 0200CST<br>0201CST         |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Pensacola Fl To<br/>Pascagoula Ms Out<br/>20Nm</b>   |         |                            |                           |                          |                      |   |                     |  |                    |
| Dauphin Island  | 25      | 0300CST<br>0301CST         |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Tarpon Springs To<br/>Suwannee River Fl 20<br/>To 60Nm</b>   |         |                            |                           |                          |                      |   |                     |  |                    |
| 40 W Bayport  | 26      | 1200EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| A line of thunderstorms associated with a feeder band well east of tropical storm Lili produced wind gusts to 36 knots at a COMPS buoy. |         |                            |                           |                          |                      |   |                     |  |                    |
| <b>Key W To Dry<br/>Tortugas Waters</b>   |         |                            |                           |                          |                      |   |                     |  |                    |
| 8 NE Boca Grande  | 28      | 1757EST<br>1804EST         |                           |                          | 0                    | 0 |                     |  | Waterspout         |
| Waterspout observed 5 miles northwest of Key West.  |         |                            |                           |                          |                      |   |                     |  |                    |
| <b>Chokoloskee To Bonita<br/>Beach Fl 20 To 60Nm</b>  |         |                            |                           |                          |                      |   |                     |  |                    |
| 10 SW Wiggins Pass to<br>10 SE Wiggins Pass   | 29      | 1755EST                    |                           |                          | 0                    | 0 |                     |  | Waterspout         |
| A SKYWARN spotter sighted a waterspout in the Gulf of Mexico just offshore Clam Pass.   |         |                            |                           |                          |                      |   |                     |  |                    |
| <b>Florida Bay</b>  |         |                            |                           |                          |                      |   |                     |  |                    |
| 7 NE Duck Key   | 30      | 1326EST                    |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| Wind gust 34 knots (39 mph) recorded at Long Key CMAN.  |         |                            |                           |                          |                      |   |                     |  |                    |
| <b><u>HAWAII</u></b>  |         |                            |                           |                          |                      |   |                     |  |                    |
| <b>Maui County</b>  |         |                            |                           |                          |                      |   |                     |  |                    |
| 5 W Wailuku   | 03      | 1415HST<br>1700HST         |                           |                          | 0                    | 0 |                     |  | Heavy Rain         |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## HAWAII

### **Honolulu County**

**5 NNW Makaha to  
Nanakuli**

Heavy showers produced ponding of roadways, and minor stream and drainage ditch flooding in West Maui. The areas most affected were the Waihee, Waiehu, and Iao valleys. No serious injuries or property damage were reported.

**03 1700HST  
1930HST 0 0 Heavy Rain**

Heavy showers and isolated thunderstorms caused minor stream and drainage ditch flooding and ponding of roadways in the western parts of Oahu, including the Waianae Range and the Waianae coastline from Makua to Nanakuli. No serious property damage or injuries were reported, however.

### **Honolulu County**

**.5 SE Waialua**

**09 1415HST  
1610HST 0 0 Wild/Forest Fire**

A brush fire burned nearly 50 acres near the intersection of Kaukonahua Road and Farrington Highway, near Thomson Corner. No homes or other structures were threatened by the blaze, and there were no injuries. The cause of the fire was not known.

### **Honolulu County**

**2 SE Ewa**

**13 1015HST  
1315HST 0 0 Wild/Forest Fire**

A brush fire scorched more than 50 acres near Iroquois Point Road, with the flames moving quickly toward new homes in the Ewa-by-Gentry subdivision. However, the fire did not cause any major property damage or injuries. Fire investigators believed that the blaze was intentionally set.

### **Maui County**

**1.5 ESE Kahului**

**17 1330HST  
2200HST 0 0 6.6K Wild/Forest Fire**

A fire burned almost 70 acres of sugar cane, kiawe, and brush along Hansen Road, not far from the Hansen Road-Hana Highway intersection. Smoke from the fire shut down Hansen Road for about four hours in the afternoon hours of the 17th. Hawaiian Commercial & Sugar Company estimated losses at more than \$6500. There were no serious injuries reported, however.

### **HIZ001>006-008**

**Kauai - Oahu - Maui - North And East Hawaii Including Windward Kohala / Hamakua / Hilo / Puna -  
Molokai - Lanai - South Hawaii Including Kau**

**22 0500HST 0 0 High Surf  
23 1600HST**

A storm low far south of the equator generated surf of 6 to 8 feet along the south shores of all the Hawaiian Islands. There were no reports of serious injuries or property damage.

### **Honolulu County**

**Honolulu**

**28 1430HST  
30 2100HST 0 0 Wild/Forest Fire**

A brush fire burned almost 60 acres over several days in Kalihi Valley, above Kalihi Elementary School. At times, the fire threatened several homes and the school. The Honolulu Fire Department used its Air One helicopter in helping to battle the fire because parts of the blaze were inaccessible by land. In the end, no serious property damage or injuries were reported. Fire officials were suspicious that the fire was deliberately set.

## HAWAII WATERS

**Channels Between The  
Islands**

**2.5 SSW Kapaa**

**17 0710HST  
0730HST 0 0 Waterspout**

Police officers spotted a large waterspout offshore from Lydgate Beach Park. However, the waterspout apparently did not make landfall. There were no reports of injuries or property damage.

## IDAHO, Extreme Southeast

NONE REPORTED.

## IDAHO, North

NONE REPORTED.

## IDAHO, Northwest

NONE REPORTED.

## IDAHO, Southeast

NONE REPORTED.

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002  |  |                            |                           |                          |                      |   |                     |     |                         |
|---|--|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|-----|-------------------------|
| Location  | Date   | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |     | Character of Storm      |
|   |  |                            |                           |                          |                      |   |                     |     |                         |
| <b><u>IDAHO, Southwest</u></b>  |  |                            |                           |                          |                      |   |                     |     |                         |
| <b>Gem County</b>   |  |                            |                           |                          |                      |   |                     |     |                         |
| 5 W Emmett to<br>4 W Emmett   | 29   | 1650MST<br>1655MST         | 1                         | 10                       | 0                    | 0 |                     |     | Tornado (F0)            |
| A tornado touched down at Tom's Cabin Road, west of Emmett, in Gem County. It tracked eastward on the ground for a mile, ripping limbs off trees, destroying an outbuilding and damaging houses and a vehicle.  |  |                            |                           |                          |                      |   |                     |     |                         |
| <b><u>ILLINOIS, Central</u></b>   |  |                            |                           |                          |                      |   |                     |     |                         |
| NONE REPORTED.  |  |                            |                           |                          |                      |   |                     |     |                         |
| <b><u>ILLINOIS, Northeast</u></b>   |  |                            |                           |                          |                      |   |                     |     |                         |
| <b>Winnebago County</b>   |  |                            |                           |                          |                      |   |                     |     |                         |
| Rockford  | 19   | 1140CST                    |                           |                          | 0                    | 0 |                     |     | Thunderstorm Wind (G50) |
| Power lines blown down.   |  |                            |                           |                          |                      |   |                     |     |                         |
| <b>Mchenry County</b>   |  |                            |                           |                          |                      |   |                     |     |                         |
| Harvard   | 19   | 1200CST<br>1300CST         |                           |                          | 0                    | 0 |                     |     | Urban/Sml Stream Fld    |
| In 35 minutes, 2.4 inches of rain fell in Harvard producing some street flooding.   |  |                            |                           |                          |                      |   |                     |     |                         |
| <b><u>ILLINOIS, Northwest</u></b>   |  |                            |                           |                          |                      |   |                     |     |                         |
| <b>Carroll County</b>   |  |                            |                           |                          |                      |   |                     |     |                         |
| 6 S Savanna   | 18   | 1455CST                    |                           |                          | 0                    | 0 |                     |     | Thunderstorm Wind (G61) |
| <b><u>ILLINOIS, South</u></b>   |  |                            |                           |                          |                      |   |                     |     |                         |
| ILZ075>078-080>094  | Jefferson - Wayne - Edwards - Wabash - Perry - Franklin - Hamilton - White - Jackson - Williamson - Saline - Gallatin - Union - Johnson - Pope - Hardin - Alexander - Pulaski - Massac |                            |                           |                          |                      |   |                     |     |                         |
| 01  | 0001CST  |                            |                           |                          | 0                    | 0 | 53M                 |     | Drought                 |
| 30  | 1800CST  |                            |                           |                          |                      |   |                     |     |                         |
| A prolonged summer drought gradually worsened, becoming severe by early September. Many parts of southern Illinois received little or no measurable rainfall in July. At Paducah, Kentucky, the three-month period from June through August of 2002 was the second driest such period on record. The main effect of the drought was on agriculture. Crop loss estimates totalled around 53 million dollars in southern Illinois. The corn crop, which was especially susceptible to the combined effects of heat and drought, took the biggest hit. About 33 million dollars in corn was lost in southern Illinois. Another 20 million dollars was lost in soybean production. Some trees and shrubs died in the drought, especially newly planted ones with shallow root systems. A few outdoor fires broke out, including a 20-acre blaze in Saline County, several miles west of Eldorado. The remnants of Tropical Storm Isidore provided much-needed heavy rainfall late in September. One to three inches of rain fell over most of southern Illinois, which greatly eased the drought. |  |                            |                           |                          |                      |   |                     |     |                         |
| <b><u>ILLINOIS, Southwest</u></b>   |  |                            |                           |                          |                      |   |                     |     |                         |
| NONE REPORTED.  |  |                            |                           |                          |                      |   |                     |     |                         |
| <b><u>INDIANA, Central</u></b>  |  |                            |                           |                          |                      |   |                     |     |                         |
| <b>Hendricks County</b>   |  |                            |                           |                          |                      |   |                     |     |                         |
| 1 S Plainfield  | 18   | 1515EST                    |                           |                          | 0                    | 0 |                     |     | Hail (0.75)             |
| <b>Marion County</b>  |  |                            |                           |                          |                      |   |                     |     |                         |
| Beech Grove   | 18   | 1605EST                    |                           |                          | 0                    | 0 |                     |     | Hail (1.00)             |
| <b>Shelby County</b>  |  |                            |                           |                          |                      |   |                     |     |                         |
| Pleasant View   | 18   | 1620EST                    |                           |                          | 0                    | 0 |                     |     | Hail (1.00)             |
| <b>Marion County</b>  |  |                            |                           |                          |                      |   |                     |     |                         |
| Beech Grove   | 18   | 1625EST                    |                           |                          | 0                    | 0 |                     |     | Thunderstorm Wind (G50) |
| Trees Down  |  |                            |                           |                          |                      |   |                     |     |                         |
| <b>Hancock County</b>   |  |                            |                           |                          |                      |   |                     |     |                         |
| 1 W New Palestine   | 18   | 1630EST                    |                           |                          | 0                    | 0 |                     |     | Hail (0.88)             |
| <b>Fountain County</b>  |  |                            |                           |                          |                      |   |                     |     |                         |
| Attica  | 19   | 1500EST                    |                           |                          | 0                    | 0 |                     |     | Thunderstorm Wind (G50) |
| Trees down  |  |                            |                           |                          |                      |   |                     |     |                         |
| <b>Tippecanoe County</b>  |  |                            |                           |                          |                      |   |                     |     |                         |
| Countywide  | 19   | 1520EST                    |                           |                          | 0                    | 0 |                     |     | Thunderstorm Wind (G50) |
| Trees down  |  |                            |                           |                          |                      |   |                     |     |                         |
| <b>Knox County</b>  |  |                            |                           |                          |                      |   |                     |     |                         |
| 6 SW Monroe City to<br>3 E Wheatland  | 20   | 1137EST<br>1158EST         | 11.5                      | 150                      | 0                    | 2 | 1M                  | 20K | Tornado (F2)            |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm      |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|-------------------------|
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                         |
| <b>INDIANA, Central</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Daviess County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 4 W Washington to<br>5 NW Washington   | 20   | 1158EST<br>1202EST         | 1.1                       | 150                      | 0                    | 0       | 25K                 | 10K   | Tornado (F2)            |
| A tornado formed along a squall line in Pike county then moved across Knox and into Daviess counties. A few homes were destroyed in Knox county and several were damaged. A conservation officer in his vehicle was thrown an eighth of a mile by the tornado.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Greene County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 1 N Worthington  | 20   | 1240EST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G50) |
| Trees down   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Owen County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| Gosport  | 20   | 1305EST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G50) |
| Trees down   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Lawrence County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| Countywide   | 20   | 1405EST<br>1420EST         |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G50) |
| Trees down   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Jackson County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 6 NW Medora  | 20   | 1420EST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G50) |
| Trees down   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Bartholomew County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Columbus   | 20   | 1430EST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G50) |
| Trees and Power lines down   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Jennings County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| North Vernon   | 20   | 1500EST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G50) |
| Trees down   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Monroe County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| Ellettsville to<br>12 N Bloomington  | 20   | 1259EST<br>1305EST         | 10.5                      | 150                      | 0                    | 0       | 10M                 | 20K   | Tornado (F3)            |
| <b>Morgan County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 7 SW Martinsville to<br>14 NE Martinsville   | 20   | 1305EST<br>1335EST         | 20                        | 150                      | 0                    | 28      | 15M                 | 30K   | Tornado (F3)            |
| <b>Johnson County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 8 SW Greenwood to<br>1 N Greenwood   | 20   | 1335EST<br>1342EST         | 7.5                       | 150                      | 0                    | 0       | 25M                 | 10K   | Tornado (F3)            |
| <b>Marion County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 2 S Southport to<br>1 NE Oaklandon   | 20   | 1342EST<br>1403EST         | 17.5                      | 150                      | 0                    | 97      | 40M                 |       | Tornado (F2)            |
| <b>Hancock County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 1 SW Mc Cordsville to<br>2 W Fortville   | 20   | 1403EST<br>1411EST         | 8.5                       | 100                      | 0                    | 0       | 2M                  | 20K   | Tornado (F0)            |
| <b>Hamilton County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 7 SE Fishers to<br>8 E Fishers   | 20   | 1411EST<br>1413EST         | 1                         | 100                      | 0                    | 0       | 25K                 | 5K    | Tornado (F0)            |
| <b>Madison County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 6 SW Pendleton to<br>5 E Alexandria  | 20   | 1413EST<br>1454EST         | 26                        | 150                      | 0                    | 2       | 8M                  | 25K   | Tornado (F2)            |
| <b>Delaware County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 10 NW Muncie to<br>5 NE Gaston   | 20   | 1454EST<br>1510EST         | 11                        | 100                      | 0                    | 0       | 3M                  | 15K   | Tornado (F2)            |
| One of Indiana's longest tracking tornados formed along a squall line on the morning of September 20. The tornado touched down near Ellettsville in Monroe county and then remained on the ground for 112 miles before lifting in Blackford county. The tornado produced F3 damage at its strongest points. Nearly 100 single family homes were destroyed, along with several mobile homes. Some apartments were also destroyed. Many businesses and hundreds of homes received damage. Several counties were declared disaster areas. |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Henry County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 11 NW New Castle to<br>13 NW New Castle  | 20   | 1447EST<br>1458EST         | 6                         | 100                      | 0                    | 0       | 2M                  | 10K   | Tornado (F2)            |
| A tornado formed along a squall line. Ten single family homes sustained major damage. As the tornado passed through a trailer park, 30 trailer homes sustained major damage.   |      |                            |                           |                          |                      |         |                     |       |                         |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm      |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|-------------------------|
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                         |
| <b><u>INDIANA, Central</u></b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Rush County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 1 SE Rushville to<br>1 E Rushville   | 20   | 1503EST<br>1504EST         | 1                         | 100                      | 0                    | 0       | 500K                | 5K    | Tornado (F0)            |
| A tornado formed along a squall line. Two mobile homes and two barns were destroyed.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b><u>INDIANA, Northeast</u></b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Adams County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 5 E Decatur  | 18   | 1800EST                    |                           |                          | 0                    | 0       | 0                   |       | Thunderstorm Wind       |
| Emergency management reported a shed was blown over.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Huntington County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| Huntington   | 19   | 1520EST                    |                           |                          | 0                    | 0       | 0                   |       | Thunderstorm Wind       |
| Newspaper reported a tree knocked down onto power line near the Homier Distributing corporate office.  |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Miami County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Macy   | 19   | 1535EST                    |                           |                          | 0                    | 0       | 0                   |       | Thunderstorm Wind       |
| Emergency management reported trees blown down.  |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Kosciusko County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Warsaw to<br>Milford   | 19   | 1548EST<br>1555EST         |                           |                          | 0                    | 0       | 0                   |       | Thunderstorm Wind       |
| Law enforcement reported trees were reported blown down in Warsaw, Leesburg and Milford.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Noble County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Ligonier   | 19   | 1605EST                    |                           |                          | 0                    | 0       | 0                   |       | Thunderstorm Wind       |
| Law enforcement reported tree limbs knocked down power lines in Ligonier. Power lines were also reported down 4 miles south of Wolcottville.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Lagrange County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| Topeka   | 19   | 1612EST                    |                           |                          | 0                    | 0       | 0                   |       | Thunderstorm Wind       |
| Law enforcement reported 3 trees blown down.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Elkhart County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 4 S New Paris  | 19   | 1615EST                    |                           |                          | 0                    | 0       | 0                   |       | Thunderstorm Wind       |
| An off duty NWS employee reported large tree limbs down.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Steuben County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 3 S Hamilton   | 19   | 1700EST                    |                           |                          | 0                    | 0       | 0                   |       | Thunderstorm Wind       |
| HAM radio operators reported several large tree limbs down.  |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Blackford County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 5 SW Hartford City to<br>5 NE Hartford City  | 20   | 1510EST<br>1520EST         | 10                        | 75                       | 0                    | 0       |                     |       | Tornado (F1)            |
| NWS officials reported the tornado touched down and lifted numerous times along the path. This tornado was produced by the same parent supercell that produced several tornadoes in the Indianapolis WFO CWA. Most of the damage occurred as it passed through Hartford City. A building at Ag Best, a fertilizer plant, was torn apart. Vehicles were also damaged at this business. The 4-H building suffered damage to its south and east sides. Numerous reports of trees and power lines were noted along the track, with trees falling down across from Southside school in Hartford City. |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Blackford County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Montpelier   | 20   | 1535EST                    |                           |                          | 0                    | 0       | 0                   |       | Thunderstorm Wind       |
| Newspaper reported a large tree was uprooted.  |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Jay County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 1 E Dunkirk to<br>Bryant   | 20   | 1540EST<br>1600EST         |                           |                          | 0                    | 0       | 0                   |       | Thunderstorm Wind       |
| Law enforcement reported trees were uprooted just east of Dunkirk. The storm then caused damage 7 miles northwest of Portland. A barn was leveled as well as tree and chimney damage at one residence. Another barn was leveled and a garage damaged about a mile north of the other destroyed barn. Trees were reported down in Bryant as well.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Adams County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 4 W Monroe to<br>6 NE Decatur  | 20   | 1545EST<br>1600EST         |                           |                          | 0                    | 0       | 0                   |       | Thunderstorm Wind       |
| Emergency management reported several trees were blown down west of Monroe. A few hundred feet from the damage, a trampoline was wrapped around the top of a large tree. A barn was also destroyed 6 miles northeast of Decatur.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Grant County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 4 E Marion   | 20   | 1606EST                    |                           |                          | 0                    | 0       | 0                   |       | Thunderstorm Wind       |
| Ham radio operators reported trees down.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b><u>INDIANA, Northwest</u></b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Lake County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| Gary   | 19   | 1110CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G50) |
| Trees blown down.  |      |                            |                           |                          |                      |         |                     |       |                         |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## INDIANA, South Central

### **Orange County**

5 E Orleans 20 1345EST 0 0 Thunderstorm Wind (G60)

### **Washington County**

Campbellsburg 20 1420EST 0 0 Thunderstorm Wind (G60)

### **Crawford County**

Leavenworth 20 1422EST 0 0 Thunderstorm Wind (G60)

Numerous trees were downed by thunderstorm winds over South Central Indiana.

### **Jefferson County**

Countywide 27 0530EST  
0900EST 0 0 Flash Flood

The remnants of Tropical Cyclone Isidore brought heavy rains to parts of South Central Indiana. At Manville, Manville Road and North China Road were impassible in places. Numerous county roads and a few bridges were washed out. SR 256 was closed from SR 62 towards Austin.

### **INZ079**

#### **Jefferson**

27 1015EST  
2115EST 0 0 Flood

Heavy rains from the remnants of Tropical Cyclone Isidore caused rises on the Muscatatuck River at Deputy. The Muscatatuck at Deputy crested at 22.55 feet at 1415 EST on September 27. Flood stage at Deputy is 20 feet. At this level, county roads are under water in northeast Jefferson County, Indiana.

## INDIANA, Southeast

### **Fayette County**

Glenwood 20 1510EST  
1514EST 0 0 25K Thunderstorm Wind (G50)

A cement building was destroyed on the Fayette-Rush County line.

### **Wayne County**

Cambridge City 20 1518EST  
1519EST 0 0 8K Thunderstorm Wind (G50)

A roof was blown off a building in town. Several trees were knocked down as well.

### **Fayette County**

Connersville 20 1525EST  
1528EST 0 0 3K Thunderstorm Wind (G50)

A few trees were blown down.

### **Wayne County**

Richmond 20 1545EST  
1549EST 0 0 3K Thunderstorm Wind (G50)

Trees were downed on the north side of town.

### **INZ073>075-080**

#### **Ripley - Dearborn - Ohio - Switzerland**

27 0519EST  
0900EST 0 0 Flood

The remnants of Tropical Storm Isidore tracked into the Ohio Valley during the early morning hours, spreading a large area of heavy tropical rains into southeast Indiana. Rainfall amounts between two and four inches were common over a four to five hour period, causing high water to close several roadways and basement flooding of numerous homes.

## INDIANA, Southwest

### **INZ081>082-085>088**

#### **Gibson - Pike - Posey - Vanderburgh - Warrick - Spencer**

01 0000CST 0 0 70M Drought  
30 1800CST

A prolonged summer drought gradually worsened, becoming severe by early September. Many parts of southwest Indiana received little or no measurable rainfall during August. At Boonville, only 0.08 inch was measured in August. Evansville reported an August total of 0.63 inch. Rainfall was highly variable during the summer, and Evansville reported more rain than many other sites. The main effect of the drought was on agriculture. Crop loss estimates totalled around 70 million dollars. The corn crop, which was especially susceptible to the combined effects of heat and drought, took the biggest hit. About 50 million dollars in corn was lost in southwest Indiana. Another 20 million dollars was lost in soybean production. Some trees and shrubs died in the drought, especially newly planted ones with shallow root systems. However, the effects of this drought on trees, shrubs, and wildfire danger was considerably less than the drought of 1999. The remnants of Tropical Storm Isidore provided very heavy rainfall late in September. One to three inches of rain fell over most of southwest Indiana, which greatly eased the drought.

### **Posey County**

8 SW Mt Vernon to 20 0940CST 0.2 40 0 0 Tornado (F0)  
7.8 SW Mt Vernon 0941CST

A brief touchdown was reported in rural farm country southwest of Mount Vernon. No damage was found. The parent thunderstorm later produced a stronger tornado near Poseyville in northern Posey County.

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|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|-------------------------|
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                         |
| <b>INDIANA, Southwest</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Posey County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 2.4 W Wadesville to<br>1.5 S Poseyville  | 20   | 0950CST<br>0956CST         | 4.7                       | 150                      | 0                    | 1       | 500K                |       | Tornado (F2)            |
| The tornado destroyed 10 mobile homes and four buildings. The greatest concentration of damage was on Highway 165 about 2 miles south of Poseyville. Peak winds were estimated around 130 MPH. Among the destroyed structures was a county highway garage. Eight vehicles were tossed, including a small van that was thrown onto a debris pile. One person was treated for a cut.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Pike County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 7 W Petersburg to<br>7 NW Petersburg   | 20   | 1035CST<br>1037CST         | 0.9                       | 75                       | 0                    | 0       | 2K                  |       | Tornado (F0)            |
| The tornado path began in a remote area just south of the White River near County Road 775 in far northwestern Pike County. The tornado was only on the ground for a mile before crossing the White River into Knox County. No known structural damage occurred in Pike County. Aerial surveys from a plane were used to determine the path of the tornado, which reached F-2 intensity after it crossed into Knox County.                           |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Warrick County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Boonville  | 27   | 0030CST<br>0400CST         |                           |                          | 0                    | 0       |                     |       | Urban/Sml Stream Fld    |
| The remnants of Tropical Storm Isidore moved slowly north from the Louisiana coast, passing through central Kentucky around daybreak on the 27th. Rainfall amounts were in the 2 to 4 inch range across Warrick County. A spotter reported 3.8 inches of rain at Boonville, causing minor flooding of streets, yards, and flood-prone areas. The region was in the midst of a drought, which allowed the ground to soak up the rainfall efficiently. |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>IOWA, Central</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Taylor County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 2 SW Lenox   | 18   | 1800CST                    |                           |                          | 0                    | 0       | 5K                  | 5K    | Hail (1.00)             |
| <b>Adair County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Adair  | 18   | 1805CST                    |                           |                          | 0                    | 0       | 25K                 | 10K   | Hail (1.75)             |
| <b>Adair County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 10 SW Greenfield   | 18   | 1815CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Adair County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 6 W Orient   | 18   | 1815CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Adair County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Greenfield   | 18   | 1820CST                    |                           |                          | 0                    | 0       | 40K                 | 10K   | Hail (1.75)             |
| <b>Union County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Kent   | 18   | 1825CST                    |                           |                          | 0                    | 0       | 2K                  |       | Hail (0.88)             |
| <b>Guthrie County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 3 N Guthrie Center   | 18   | 1830CST                    |                           |                          | 0                    | 0       | 20K                 | 10K   | Hail (1.75)             |
| <b>Guthrie County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Guthrie Center   | 18   | 1830CST                    |                           |                          | 0                    | 0       | 5K                  | 3K    | Hail (1.00)             |
| <b>Union County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Afton  | 18   | 1850CST                    |                           |                          | 0                    | 0       | 5K                  | 2K    | Hail (1.00)             |
| <b>Guthrie County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 2 N Adair  | 18   | 1858CST                    |                           |                          | 0                    | 0       | 20K                 | 10K   | Hail (1.75)             |
| <b>Clarke County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| Murray   | 18   | 1902CST                    |                           |                          | 0                    | 0       | 3K                  |       | Hail (0.88)             |
| <b>Dallas County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| Linden   | 18   | 1902CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Adair County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 3 E Orient   | 18   | 1910CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Clarke County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 1 W Murray   | 18   | 1927CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Warren County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 3 S New Virginia   | 18   | 1934CST                    |                           |                          | 0                    | 0       | 20K                 | 10K   | Hail (1.75)             |
| <b>Clarke County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| Liberty  | 18   | 1936CST<br>1938CST         |                           |                          | 0                    | 0       | 5K                  | 2K    | Thunderstorm Wind (G52) |
| <b>Warren County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 3 E Liberty Center   | 18   | 1936CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Monroe County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 6 W Albia  | 18   | 1941CST                    |                           |                          | 0                    | 0       | 3K                  |       | Hail (0.88)             |

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| September 2002   |      |                            |                           |                          |                      |         |                     |       |                         |
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|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                         |
| <b><u>IOWA, Central</u></b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Boone County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 6 N Ogden  | 18   | 1945CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Lucas County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 2 N Oakley   | 18   | 2005CST                    |                           |                          | 0                    | 0       | 5K                  | 2K    | Thunderstorm Wind (G52) |
| <b>Marion County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| Dallas   | 18   | 2005CST                    |                           |                          | 0                    | 0       | 3K                  |       | Hail (0.88)             |
| <b>Marion County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| Melcher  | 18   | 2007CST                    |                           |                          | 0                    | 0       | 5K                  | 2K    | Thunderstorm Wind (G52) |
| <b>Marion County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 1 W Melcher  | 18   | 2009CST                    |                           |                          | 0                    | 0       | 3K                  | 1K    | Hail (0.88)             |
| <b>Marion County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 5 S Knoxville  | 18   | 2047CST                    |                           |                          | 0                    | 0       | 3K                  | 1K    | Hail (0.88)             |
| <b>Marion County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 2 W Attica   | 18   | 2100CST                    |                           |                          | 0                    | 0       | 5K                  | 2K    | Thunderstorm Wind (G52) |
| <b>Polk County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| Alleman  | 18   | 2140CST                    |                           |                          | 0                    | 0       | 5K                  | 2K    | Thunderstorm Wind (G52) |
| <b>Polk County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| Elkhart  | 18   | 2148CST                    |                           |                          | 0                    | 0       | 3K                  |       | Hail (0.88)             |
| A very unstable air mass was located over Iowa during the afternoon of the 18th. Low pressure moved across the northern U.S. with a trailing cold front extending south from the low. A warm front had lifted north into Iowa during the afternoon. Temperatures warmed well into the 80s over the south half of Iowa, with surface dew point temperatures in the upper 60s to low 70s. This produced lifted indices of -5 C. and below. During the late afternoon thunderstorms erupted east of the approaching cold front. A line of thunderstorms developed rapidly and produced numerous reports of hail ranging from three-quarters of an inch up to golf ball in size. The line progressed east into central and eventually eastern Iowa before it weakened. The system began to become more of a wind system after sunset. Wind gusts of 60 MPH were reported in south central into parts of central Iowa. The most significant damage occurred in Marion County where high winds downed power pols west of Attica. |      |                            |                           |                          |                      |         |                     |       |                         |
| <b><u>IOWA, East Central and Southeast</u></b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Jones County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Anamosa  | 18   | 1257CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.88)             |
| <b>Jones County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Anamosa  | 18   | 1258CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Jones County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 4 N Wyoming  | 18   | 1314CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G61) |
| <b>Jones County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Wyoming  | 18   | 1321CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Jones County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Wyoming  | 18   | 1321CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G61) |
| <b>Jones County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Wyoming  | 18   | 1325CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.25)             |
| <b>Jones County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Wyoming  | 18   | 1330CST                    |                           |                          | 0                    | 0       |                     |       | Urban/Sml Stream Fld    |
| <b>Jackson County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Maquoketa  | 18   | 1340CST<br>1400CST         |                           |                          | 0                    | 0       | 20M                 |       | Hail (2.75)             |
| <b>Jackson County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Maquoketa  | 18   | 1340CST<br>1400CST         |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G61) |
| <b>Jackson County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Baldwin  | 18   | 1342CST                    |                           |                          | 0                    | 0       |                     |       | Hail (2.50)             |
| <b>Jackson County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Baldwin  | 18   | 1342CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G70) |
| <b>Jackson County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 1 W Maquoketa  | 18   | 1351CST                    |                           |                          | 0                    | 0       |                     |       | Hail (2.75)             |
| <b>Jackson County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Maquoketa  | 18   | 1351CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Clinton County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Goose Lake   | 18   | 1420CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |

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|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## IOWA, East Central and Southeast

### Clinton County

Goose Lake

18 1420CST

0 0

Thunderstorm Wind (G61)

A cluster of thunderstorms weakened while moving into Northeast Iowa toward the noon hour near and northwest of Cedar Rapids. An isolated single cell continued to track east however, and with the mid afternoon heating intensified over Jones County. The storm eventually became a high precipitation supercell as it moved into Jackson County producing a swath of damaging hail up to baseball size and winds of 70 to 80 mph. The city of Maquoketa was hardest hit as most residents reported some property damage. Nearly 1,000 new and used vehicles from several automotive dealerships suffered hail damage. One owner of a car dealership was quoted as saying that the cars on his lot looked like they had chicken pox. The pea to golf ball sized hail was so frequent, lasting nearly 20 minutes, that melting remnants left a nearly 2 inch thick sheet of ice in the bed of one pickup truck. Damage to the city of Maquoketa alone was estimated at nearly 20 million dollars.

## IOWA, Northeast

NONE REPORTED.

## IOWA, Northwest

### Cherokee County

10 W Cherokee

01 1048CST

0 0

Hail (1.75)

### Cherokee County

4 SW Meriden

01 1055CST

0 0

Hail (1.00)

### Lyon County

Doon

18 0345CST

0 0

Hail (1.00)

### Plymouth County

3 N Hinton

18 1740CST

0 0

Hail (0.75)

### Plymouth County

Struble

18 1800CST  
1810CST

0 0

Hail (1.00)

### Sioux County

3 S Maurice

18 1800CST  
1815CST

0 0

Hail (1.00)

### Lyon County

5 SE Rock Rapids

24 1720CST

0 0

Hail (0.75)

### Plymouth County

5 S Le Mars to

7 S Le Mars

24 1730CST  
1740CST

0 0

100K

Tstm Wind/Hail

According to a report from the county extension officer, small hail, accompanied by gusty winds, caused damage to corn and soybean crops.

## IOWA, Southwest

### Monona County

Ute

18 0344CST

0 0

Hail (1.00)

### Page County

Clarinda

18 1650CST

0 0

Hail (1.00)

### Page County

Clarinda

18 1701CST

0 0

Hail (1.75)

### Page County

Shambaugh

18 1727CST

0 0

Hail (1.75)

### Pottawattamie County

3 N Honey Creek

25 1200CST

0 0

Hail (0.75)

## KANSAS, East

KSZ008>012-020>024-  
026-034>040-054>056-  
058>059

Republic - Washington - Marshall - Nemaha - Brown - Cloud - Clay - Riley - Pottawatomie - Jackson - Jefferson - Ottawa - Dickinson - Geary - Morris - Wabaunsee - Shawnee - Douglas - Lyon - Osage - Franklin - Coffey - Anderson

01 0001CST  
30 2359CST

0 0

Drought

The drought conditions that started in July continued through September. Many crops and pasturelands over the area were greatly affected. Farm ponds were void of ample water for cattle and crops were either plowed up or made into fodder for farm animals. No actual crop damage figures were available but estimates for all of northeast Kansas were likely to exceed 25 million dollars.

### Shawnee County

Topeka

04 1933CST

0 0

Funnel Cloud

A law enforcement official sighted a funnel cloud over western Topeka.

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| <b><u>KANSAS, East</u></b>                     |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Morris County</b>                           |      |                            |                           |                          |                      |         |                     |       |                         |
| 1 W Council Grove                              | 18   | 1600CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Wabaunsee County</b>                        |      |                            |                           |                          |                      |         |                     |       |                         |
| 7 N Paxico                                     | 18   | 1718CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Wabaunsee County</b>                        |      |                            |                           |                          |                      |         |                     |       |                         |
| 7 N Paxico                                     | 18   | 1718CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G52) |
| <b>Pottawatomie County</b>                     |      |                            |                           |                          |                      |         |                     |       |                         |
| 3 N Emmett                                     | 18   | 1726CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Jackson County</b>                          |      |                            |                           |                          |                      |         |                     |       |                         |
| 12 SSW Soldier                                 | 18   | 1733CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Jackson County</b>                          |      |                            |                           |                          |                      |         |                     |       |                         |
| 5 SSW Soldier                                  | 18   | 1742CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Nemaha County</b>                           |      |                            |                           |                          |                      |         |                     |       |                         |
| Corning  | 18   | 1758CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G52) |
| <b>Jackson County</b>                          |      |                            |                           |                          |                      |         |                     |       |                         |
| 2 WNW Holton                                   | 18   | 1800CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Jackson County</b>                          |      |                            |                           |                          |                      |         |                     |       |                         |
| Holton   | 18   | 1806CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Jackson County</b>                          |      |                            |                           |                          |                      |         |                     |       |                         |
| Holton   | 18   | 1806CST                    |                           |                          | 0                    | 0       | 1K                  |       | Thunderstorm Wind (G52) |
| Strong winds blew over a construction trailer. |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Jackson County</b>                          |      |                            |                           |                          |                      |         |                     |       |                         |
| Holton   | 18   | 1807CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Nemaha County</b>                           |      |                            |                           |                          |                      |         |                     |       |                         |
| 7 N Goff                                       | 18   | 1813CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G52) |
| <b>Nemaha County</b>                           |      |                            |                           |                          |                      |         |                     |       |                         |
| Sabetha  | 18   | 1827CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Brown County</b>                            |      |                            |                           |                          |                      |         |                     |       |                         |
| Morrill  | 18   | 1833CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Dickinson County</b>                        |      |                            |                           |                          |                      |         |                     |       |                         |
| Herington                                      | 18   | 1835CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Dickinson County</b>                        |      |                            |                           |                          |                      |         |                     |       |                         |
| 1 S Herington                                  | 18   | 1835CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.88)             |
| <b>Brown County</b>                            |      |                            |                           |                          |                      |         |                     |       |                         |
| Everest  | 18   | 1839CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Riley County</b>                            |      |                            |                           |                          |                      |         |                     |       |                         |
| 2 S Manhattan                                  | 18   | 1840CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Morris County</b>                           |      |                            |                           |                          |                      |         |                     |       |                         |
| 3 S Latimer                                    | 18   | 1843CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Jackson County</b>                          |      |                            |                           |                          |                      |         |                     |       |                         |
| 2 SE Hoyt                                      | 18   | 1950CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Jefferson County</b>                        |      |                            |                           |                          |                      |         |                     |       |                         |
| 6 W Valley Falls                               | 18   | 1956CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Jefferson County</b>                        |      |                            |                           |                          |                      |         |                     |       |                         |
| 6 W Valley Falls                               | 18   | 1956CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G52) |
| <b>Jefferson County</b>                        |      |                            |                           |                          |                      |         |                     |       |                         |
| Boyle  | 18   | 2005CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Jefferson County</b>                        |      |                            |                           |                          |                      |         |                     |       |                         |
| 2 E Winchester                                 | 18   | 2014CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G52) |

Thunderstorms developed late in the afternoon of the 18th over northeast and east central Kansas and continued well into the evening hours. Many of the storms became severe and produced numerous reports of large hail and strong winds.

## **KANSAS, Extreme Southeast**

NONE REPORTED.

## **KANSAS, North Central**

NONE REPORTED.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## KANSAS, Northeast

|                    |    |         |  |  |   |   |  |  |             |
|--------------------|----|---------|--|--|---|---|--|--|-------------|
| Leavenworth County |    |         |  |  |   |   |  |  |             |
| Easton             | 18 | 2033CST |  |  | 0 | 0 |  |  | Hail (0.75) |
| Leavenworth County |    |         |  |  |   |   |  |  |             |
| Lowemont           | 18 | 2035CST |  |  | 0 | 0 |  |  | Hail (0.75) |

## KANSAS, Northwest

NONE REPORTED.

## KANSAS, Southeast

|                 |    |         |  |  |   |   |  |  |                         |
|-----------------|----|---------|--|--|---|---|--|--|-------------------------|
| Harper County   |    |         |  |  |   |   |  |  |                         |
| 6 W Attica      | 18 | 1505CST |  |  | 0 | 0 |  |  | Hail (1.00)             |
| Harper County   |    |         |  |  |   |   |  |  |                         |
| Attica          | 18 | 1505CST |  |  | 0 | 0 |  |  | Hail (1.75)             |
| Harper County   |    |         |  |  |   |   |  |  |                         |
| 1 N Attica      | 18 | 1506CST |  |  | 0 | 0 |  |  | Hail (1.75)             |
| Harper County   |    |         |  |  |   |   |  |  |                         |
| 4 N Attica      | 18 | 1511CST |  |  | 0 | 0 |  |  | Hail (1.75)             |
| Harper County   |    |         |  |  |   |   |  |  |                         |
| Harper          | 18 | 1530CST |  |  | 0 | 0 |  |  | Hail (1.75)             |
| Harper County   |    |         |  |  |   |   |  |  |                         |
| Harper          | 18 | 1542CST |  |  | 0 | 0 |  |  | Hail (2.50)             |
| Sedgwick County |    |         |  |  |   |   |  |  |                         |
| 2 N Cheney      | 18 | 1555CST |  |  | 0 | 0 |  |  | Hail (0.75)             |
| Sedgwick County |    |         |  |  |   |   |  |  |                         |
| 5 SW Goddard    | 18 | 1559CST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G61) |
| Harper County   |    |         |  |  |   |   |  |  |                         |
| 2 NE Runnymede  | 18 | 1605CST |  |  | 0 | 0 |  |  | Hail (1.75)             |
| Harvey County   |    |         |  |  |   |   |  |  |                         |
| 6 E Newton      | 18 | 1611CST |  |  | 0 | 0 |  |  | Hail (0.75)             |
| Harper County   |    |         |  |  |   |   |  |  |                         |
| 5 N Anthony     | 18 | 1612CST |  |  | 0 | 0 |  |  | Hail (0.88)             |
| Sumner County   |    |         |  |  |   |   |  |  |                         |
| 3 W Conway Spgs | 18 | 1615CST |  |  | 0 | 0 |  |  | Hail (1.75)             |
| Sedgwick County |    |         |  |  |   |   |  |  |                         |
| Wichita         | 18 | 1623CST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G61) |
| Marion County   |    |         |  |  |   |   |  |  |                         |
| 7 E Peabody     | 18 | 1640CST |  |  | 0 | 0 |  |  | Hail (1.00)             |
| Sedgwick County |    |         |  |  |   |   |  |  |                         |
| 5 S Derby       | 18 | 1700CST |  |  | 0 | 0 |  |  | Hail (0.88)             |
| Sumner County   |    |         |  |  |   |   |  |  |                         |
| 1 W Wellington  | 18 | 1702CST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G61) |
| Sumner County   |    |         |  |  |   |   |  |  |                         |
| Belle Plaine    | 18 | 1704CST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G56) |
| Sumner County   |    |         |  |  |   |   |  |  |                         |
| Belle Plaine    | 18 | 1711CST |  |  | 0 | 0 |  |  | Hail (0.88)             |
| Cowley County   |    |         |  |  |   |   |  |  |                         |
| Udall           | 18 | 1750CST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G56) |
| Cowley County   |    |         |  |  |   |   |  |  |                         |
| 5 W Atlanta     | 18 | 1753CST |  |  | 0 | 0 |  |  | Hail (1.00)             |
| Cowley County   |    |         |  |  |   |   |  |  |                         |
| 2 N Atlanta     | 18 | 1754CST |  |  | 0 | 0 |  |  | Hail (1.00)             |
| Cowley County   |    |         |  |  |   |   |  |  |                         |
| 1 W Atlanta     | 18 | 1756CST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G61) |
| Butler County   |    |         |  |  |   |   |  |  |                         |
| 4 W Latham      | 18 | 1801CST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G52) |
| Butler County   |    |         |  |  |   |   |  |  |                         |
| 5 E Smileyburg  | 18 | 1802CST |  |  | 0 | 0 |  |  | Hail (1.00)             |

Occurred on west side of town.

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |         |                            |                           |                          |                      |   |                     |  |                         |
|--|---------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|--|-------------------------|
| Location   | Date    | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |  | Character of Storm      |
| Killed   | Injured | Property                   | Crops                     |                          |                      |   |                     |  |                         |
| <b><u>KANSAS, Southeast</u></b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Butler County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 5 SE Smileyburg  | 18      | 1802CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G61) |
| <b>Butler County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Latham   | 18      | 1812CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.00)             |
| <b>Elk County</b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| 10 NE Howard   | 18      | 1900CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G65) |
| Unspecified farm equipment moved slightly. Velocities estimated between 61 and 70 kts. Time of occurrence estimated. |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Cowley County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Arkansas City  | 18      | 1917CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Cowley County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 2 S Burden   | 18      | 1918CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.00)             |
| <b>Wilson County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 5 NW Fredonia  | 18      | 1941CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Wilson County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Fredonia   | 18      | 1945CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.00)             |
| <b>Wilson County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Fredonia   | 18      | 1946CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52) |
| <b>Cowley County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 15 E Arkansas City   | 18      | 1952CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.00)             |
| <b>Cowley County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 2 SE Hooser  | 18      | 1955CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.00)             |
| <b>Cowley County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 9 NE Dexter  | 18      | 2015CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Chautauqua County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Cedar Vale   | 18      | 2020CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.00)             |
| <b>Neosho County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 1 W Chanute  | 18      | 2021CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G61) |
| <b>Sedgwick County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Cheney   | 18      | 2055CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.00)             |
| <b><u>KANSAS, Southwest</u></b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Barber County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 3 S Sharon   | 18      | 1450CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b><u>KENTUCKY, Central</u></b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Ohio County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Hartford   | 15      | 1420EST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G60) |
| Power lines were downed.   |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Ohio County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Jingo  | 15      | 1420EST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G60) |
| Trees were down across SR 1164.  |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Meade County</b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| Brandenburg  | 20      | 1515EST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G60) |
| Power lines were downed by thunderstorm winds.   |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Logan County</b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| Countywide   | 26      | 1903EST                    |                           |                          | 0                    | 0 |                     |  | Flash Flood             |
|  | 27      | 0115EST                    |                           |                          |                      |   |                     |  |                         |
| <b>Allen County</b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| 10 N Scottsville   | 26      | 1918EST                    |                           |                          | 0                    | 0 |                     |  | Flash Flood             |
|  | 27      | 0030EST                    |                           |                          |                      |   |                     |  |                         |
| <b>Simpson County</b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| Countywide   | 26      | 1918EST                    |                           |                          | 0                    | 0 |                     |  | Flash Flood             |
|  | 27      | 0030EST                    |                           |                          |                      |   |                     |  |                         |
| <b>Warren County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Bowling Green  | 26      | 1918EST                    |                           |                          | 0                    | 0 |                     |  | Flash Flood             |
|  | 27      | 0100EST                    |                           |                          |                      |   |                     |  |                         |
| <b>Ohio County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Countywide   | 26      | 2220EST                    |                           |                          | 0                    | 0 |                     |  | Flash Flood             |
|  | 27      | 0200EST                    |                           |                          |                      |   |                     |  |                         |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |        |                            |                           |                          |                      |         |                     |       |                    |
|--|--------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
| Location   | Date   | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|  |        |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b><u>KENTUCKY, Central</u></b>  |        |                            |                           |                          |                      |         |                     |       |                    |
| <b>Butler County</b>   |        |                            |                           |                          |                      |         |                     |       |                    |
| Countywide   | 26     | 2330EST                    |                           |                          | 0                    | 0       |                     |       | Flash Flood        |
|  | 27     | 0100EST                    |                           |                          |                      |         |                     |       |                    |
| <b>Edmonson County</b>   |        |                            |                           |                          |                      |         |                     |       |                    |
| Brownsville  | 26     | 2335EST                    |                           |                          | 0                    | 0       |                     |       | Flash Flood        |
|  | 27     | 0030EST                    |                           |                          |                      |         |                     |       |                    |
| <b>KYZ070</b>  |        |                            |                           |                          |                      |         |                     |       |                    |
|  | Logan  |                            |                           |                          |                      |         |                     |       |                    |
|  | 27     | 0115EST                    |                           |                          | 0                    | 0       |                     |       | Flood              |
|  |        | 0505EST                    |                           |                          |                      |         |                     |       |                    |
| <b>Meade County</b>  |        |                            |                           |                          |                      |         |                     |       |                    |
| Countywide   | 27     | 0120EST                    |                           |                          | 0                    | 0       |                     |       | Flash Flood        |
|  |        | 0300EST                    |                           |                          |                      |         |                     |       |                    |
| <b>Breckinridge County</b>   |        |                            |                           |                          |                      |         |                     |       |                    |
| Countywide   | 27     | 0145EST                    |                           |                          | 0                    | 0       |                     |       | Flash Flood        |
|  |        | 0230EST                    |                           |                          |                      |         |                     |       |                    |
| The remnants of Tropical Cyclone Isidore crossed Kentucky during the evening of September 26 into the early morning hours of September 27. The storm dropped heavy rains, particularly over parts of South Central Kentucky. Numerous county roads were covered by water in the area. Logan County was one of the hardest hit areas. Some bridges in the county were flooded over. Search and rescue in Russellville had to pump water out of city streets. In Ohio County, a number of county roads were covered by 6 inches of water, and the Western Kentucky Parkway at mile marker 70 was covered by 3 inches of water. City streets were flooded or closed in Bowling Green (Warren County), Morgantown (Butler County), Brownsville (Edmonson County), Beaver Dam and Hartford (Ohio County). |        |                            |                           |                          |                      |         |                     |       |                    |
| <b>KYZ061</b>  |        |                            |                           |                          |                      |         |                     |       |                    |
|  | Butler |                            |                           |                          |                      |         |                     |       |                    |
|  | 28     | 0100EST                    |                           |                          | 0                    | 0       |                     |       | Flood              |
|  |        | 1700EST                    |                           |                          |                      |         |                     |       |                    |
| The remnants of Tropical Cyclone Isidore dropped heavy rains over South Central Kentucky on September 26 and 27. This caused rises on the Green River at Woodbury. The Green River at Woodbury crested at 33.2 feet at 0545 EST on September 28. Flood stage at Woodbury is 33 feet. At this level, lowlands around Woodbury begin to flood.   |        |                            |                           |                          |                      |         |                     |       |                    |
| <b>KYZ061</b>  |        |                            |                           |                          |                      |         |                     |       |                    |
|  | Butler |                            |                           |                          |                      |         |                     |       |                    |
|  | 28     | 0700EST                    |                           |                          | 0                    | 0       |                     |       | Flood              |
|  | 29     | 1400EST                    |                           |                          |                      |         |                     |       |                    |
| The remnants of Tropical Cyclone Isidore brought heavy rains to South Central Kentucky on September 26 and 27. This caused rises on the Green River at Rochester. The Green River at Rochester crested at 18.0 feet at 0700 EST on September 29. Flood stage at Rochester is 17 feet. At this level minor flooding occurs and operations at the ferry are shut down.   |        |                            |                           |                          |                      |         |                     |       |                    |
| <b><u>KENTUCKY, Eastern</u></b>  |        |                            |                           |                          |                      |         |                     |       |                    |
| <b>Montgomery County</b>   |        |                            |                           |                          |                      |         |                     |       |                    |
| Judy   | 14     | 1910EST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)        |
| <b>Bath County</b>   |        |                            |                           |                          |                      |         |                     |       |                    |
| Sharpsburg   | 14     | 1920EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Tstm Wind/Hail     |
| Trees were reported down along with a telephone line along West Tunnel Hill Road about 4 miles southeast of Sharpsburg. Also, three quarter inch hail was reported in Sharpsburg.  |        |                            |                           |                          |                      |         |                     |       |                    |
| <b>Elliott County</b>  |        |                            |                           |                          |                      |         |                     |       |                    |
| Bruin  | 18     | 1520EST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.88)        |
| <b>KYZ051</b>  |        |                            |                           |                          |                      |         |                     |       |                    |
|  | Bath   |                            |                           |                          |                      |         |                     |       |                    |
|  | 20     | 1835EST                    |                           |                          | 0                    | 0       | 2K                  | 0     | High Wind          |
| Trees and power lines were down from a non-thunderstorm gust front.  |        |                            |                           |                          |                      |         |                     |       |                    |
| <b>KYZ108</b>  |        |                            |                           |                          |                      |         |                     |       |                    |
|  | Wolfe  |                            |                           |                          |                      |         |                     |       |                    |
|  | 20     | 1915EST                    |                           |                          | 0                    | 0       | 0                   | 0     | High Wind          |
| One tree was down on Kentucky Highway 715 near Rock Bridge Road, about one half mile northeast of the town of Pine Ridge.  |        |                            |                           |                          |                      |         |                     |       |                    |
| <b><u>KENTUCKY, Northeast</u></b>  |        |                            |                           |                          |                      |         |                     |       |                    |
| <b>KYZ101&gt;103-105</b>   |        |                            |                           |                          |                      |         |                     |       |                    |
| <b>Greenup - Carter - Boyd - Lawrence</b>  |        |                            |                           |                          |                      |         |                     |       |                    |
|  | 01     | 0000EST                    |                           |                          | 0                    | 0       |                     |       | Drought            |
|  | 25     | 2300EST                    |                           |                          |                      |         |                     |       |                    |
| The hot and dry pattern of August spilled over into the 1st half of September. Readings in the 90s were common for the first 10 days of the month. Drought conditions developed. Conditions improved during the fourth week, as rains and cooler temperatures arrived.   |        |                            |                           |                          |                      |         |                     |       |                    |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## KENTUCKY, Northern

### **KYZ089**

#### **Carroll**

27 0725EST  
0900EST

0 0

Flood

The remnants of Tropical Storm Isidore tracked into the Ohio Valley during the early morning hours, spreading a large area of heavy tropical rains into northern Kentucky. Rainfall amounts between two and four inches were common over a four to five hour period, with flooding on several county roadways and in Carrollton.

## KENTUCKY, Southwest

### **KYZ001>022**

**Fulton - Hickman - Carlisle - Ballard - Mcracken - Graves - Livingston - Marshall - Calloway - Crittenden - Lyon - Trigg - Caldwell - Union - Webster - Hopkins - Christian - Henderson - Daviess - Mclean - Muhlenberg - Todd**

01 0000CST  
30 1800CST

0 0

70M Drought

A prolonged summer drought gradually worsened, becoming severe in early September. Many parts of western Kentucky received no measurable rainfall through the first two weeks of September. At Paducah, the three-month period from June through August of 2002 was the second driest such period on record. Total rainfall during the period from June 1 to September 15 was only 5 inches, well below the normal of about 13 inches. The main effect of the drought was on agriculture. Crop loss estimates totalled around 70 million dollars. The corn crop, which was especially susceptible to the combined effects of heat and drought, took the biggest hit. About 35 million dollars in corn was lost in western Kentucky. About 20 million dollars in tobacco was lost, and another 15 million dollars was lost in soybean production. Some trees and shrubs died in the drought, especially newly planted ones with shallow root systems. A few counties declared bans on outdoor burning due to the high fire danger. A fire burned 50 acres of pasture along Interstate 24 near the Grand Rivers exit. However, the effects of this drought on trees, shrubs, and the soybean crop were considerably less than the drought of 1999. The remnants of Tropical Storm Isidore provided very heavy rainfall late in September. Four to eight inches of rain fell over most of western Kentucky, which greatly eased the drought.

#### **Daviess County Owensboro**

15 1300CST  
1500CST

0 0

Urban/Sml Stream Fld

A slow-moving thunderstorm produced very heavy rain over the City of Owensboro. Several places in the city reported street flooding. There were no reports of impassable or closed roads.

#### **Trigg County Cadiz**

20 1205CST

0 0

4K

Thunderstorm Wind (G50)

Several trees were blown down in the Cadiz area, including one that fell across power lines.

#### **Christian County 6 W Crofton to Mannington**

20 1212CST  
1222CST

0 0

12K

Thunderstorm Wind (G70)

Spotty wind damage occurred over northern Christian County. The first wind event occurred on State Route 109, about 6 miles west of Crofton. Winds near 65 MPH uprooted or snapped numerous trees. About two miles northeast of the first event, more significant damage occurred. Winds near 80 MPH destroyed an unanchored trailer home on Highway 1348, and nearby trees were damaged. The final event occurred near Mannington, where some trees were blown down in the area of U.S. Highway 41 and Kentucky 407.

#### **Hopkins County 4.5 S Nortonville to Mortons Gap**

20 1220CST  
1230CST

0 0

Thunderstorm Wind (G52)

Several large trees were blown down along U.S. Highway 41 from Mortons Gap to the Christian County line.

#### **Todd County Countywide**

26 1755CST  
27 0400CST

0 0

Flash Flood

#### **Christian County Countywide**

26 1955CST  
27 0400CST

0 0

Flash Flood

#### **Trigg County Cadiz**

26 2145CST  
27 0400CST

0 0

5K

Flash Flood

#### **Calloway County 2 S New Concord**

26 2150CST  
27 0300CST

0 0

Flash Flood

#### **Graves County Tri City**

26 2200CST  
27 0300CST

0 0

Flash Flood

The remnants of Tropical Storm Isidore moved north from the Louisiana coast, passing over central Kentucky. The large size of the storm, combined with its relatively slow movement, contributed to excessive rainfall in excess of 4 inches. The heaviest rainfall was southeast of a line from Mayfield to Owensboro, where 4 to 8 inches fell. The heaviest total was 8.17 inches at the Paradise Steam Plant on the Green River in Muhlenberg County. A co-operative observer measured 8.04 inches at Herndon in Christian County.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## KENTUCKY, Southwest

The next five heaviest totals were 6.26 inches at Hopkinsville (Christian County), 6.50 inches at the Green River Power Plant (Muhlenberg County), 5.88 inches at Canton (Trigg County), 5.73 inches at Cadiz (Trigg County), and 5.34 inches at New Concord (Calloway County). The flooding was mitigated by the ability of the drought-stricken soil to absorb rainfall. Street flooding was the main problem. Portions of several state highways were flooded in Todd County, including Highways 181, 79, 41, 346, and 848. In Calloway County, seven inches of water covered Highway 121 south of New Concord. Several secondary roads were closed in Christian County. Water entered the Trigg County courthouse.

### KYZ021

#### **Muhlenberg**

27 0300CST

0 0

Flood

30 1800CST

The Green River rose above flood stage at the Paradise Steam Plant in response to very heavy rains from the remnants of Tropical Storm Isidore. About 8 inches of rain was measured by co-operative observers in parts of the Green River basin, including 8.17 inches at the Paradise Steam Plant. The river flooding was minor, cresting at 383.9 feet on September 29. Flood stage is 380 feet. The remnants of Isidore moved north from the Louisiana coast and across central Kentucky.

## LAKE ERIE

### **Le Detroit R Lt To Reno Beach Oh Byd 5Nm Offshore To Intl Border**

Maumee Bay to 02 1400EST  
Reno Beach 1530EST

0 0

Marine Tstm Wind

### **Le Reno Beach To The Islands Oh Byd 5Nm Offshore To Intl Border**

Reno Beach to 02 1400EST  
The Islands 1530EST

0 0

Marine Tstm Wind

### **Le The Islands To Vermilion Oh Byd 5Nm Offshore To Intl Border**

The Islands to 02 1400EST  
Vermilion 1530EST

0 0

Marine Tstm Wind

### **Le Vermilion To Avon Pt Oh Byd 5Nm Offshore To Intl Border**

Vermilion to 02 1400EST  
Avon Point 1530EST

0 0

Marine Tstm Wind

### **Maumee Bay To Reno Beach Oh**

Maumee Bay to 02 1400EST  
Reno Beach 1530EST

0 0

Marine Tstm Wind

### **Reno Beach To The Islands Oh**

Reno Beach to 02 1400EST  
The Islands 1530EST

0 0

Marine Tstm Wind

### **The Islands To Vermilion Oh**

The Islands to 02 1400EST  
Vermilion 1530EST

0 0

Marine Tstm Wind

### **Vermilion To Avon Point Oh**

Vermilion to 02 1400EST  
Avon Point 1530EST

0 0

Marine Tstm Wind

A line of thunderstorms moved across the western end of Lake Erie and produced wind gusts in excess of 35 knots. A 46 knot gust was measured at Port Clinton (Ottawa County) by an automated sensor. A 35 knot gust was also measured at Marblehead (Ottawa County). A 39 knot gust was measured at Cedar Point (Erie County).

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |      |                            |                           |                          |                      |   |                     |  |                    |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|--|--------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |  | Character of Storm |
| <b>LAKE ERIE</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Avon Point To<br/>Willowick Oh</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Avon Point to<br>Willowick   | 02   | 1615EST<br>1645EST         |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Le Avon Pt To<br/>Willowick Oh Byd<br/>5Nm Offshore To Intl<br/>Border</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Avon Point to<br>Willowick   | 02   | 1615EST<br>1645EST         |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Willowick To Geneva<br/>On The Lake Oh</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Willowick to<br>Geneva-On-The-Lake   | 02   | 1615EST<br>1645EST         |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| A strong thunderstorm moved east over Lake Erie and produced wind gusts in excess of 35 knots. A 41 knot gust was measured at the Cleveland Lighthouse with a 36 knot gust at Cleveland Burke Lakefront Airport. |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Geneva On The Lake<br/>Oh To Conneaut Oh</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Geneva-On-The-Lake to<br>Conneaut  | 02   | 1700EST<br>1745EST         |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Le Geneva On The<br/>Lake To Conneaut Oh<br/>Byd 5Nm Offshore To<br/>Intl Border</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Geneva-On-The-Lake to<br>Conneaut  | 02   | 1700EST<br>1745EST         |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Le Willowick To<br/>Geneva On The Lake<br/>Oh Byd 5Nm Offshore<br/>To Intl Border</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Willowick to<br>Geneva-On-The-Lake   | 02   | 1700EST<br>1745EST         |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Willowick To Geneva<br/>On The Lake Oh</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Willowick to<br>Geneva-On-The-Lake   | 02   | 1700EST<br>1745EST         |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| A strong thunderstorm moved east over Lake Erie and produced wind gusts in excess of 35 knots.   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Buffalo Hbr And Up<br/>Niagara R</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Grand Island   | 03   | 1115EST                    |                           |                          | 0                    | 0 |                     |  | Marine Hail        |
| <b>Le Detroit R Lt To<br/>Reno Beach Oh Byd<br/>5Nm Offshore To Intl<br/>Border</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Maumee Bay to<br>Reno Beach  | 18   | 1745EST<br>1915EST         |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Le Reno Beach To The<br/>Islands Oh Byd 5Nm<br/>Offshore To Intl<br/>Border</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Reno Beach to<br>The Islands   | 18   | 1745EST<br>1915EST         |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |
| <b>Maumee Bay To Reno<br/>Beach Oh</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Maumee Bay to<br>Reno Beach  | 18   | 1745EST<br>1915EST         |                           |                          | 0                    | 0 |                     |  | Marine Tstm Wind   |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |      |                            |                           |                          |                      |         |                     |       |                    |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b><u>LAKE ERIE</u></b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Reno Beach To The Islands Oh</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Reno Beach   | 18   | 1745EST<br>1915EST         |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| A strong thunderstorm moved northeast across the western basin of Lake Erie and produced winds in excess of 35 knots.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Mi Waters Of Lake Erie</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| 6 W Luna Pier  | 19   | 1830EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Le Detroit R Lt To Reno Beach Oh Byd 5Nm Offshore To Intl Border</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Maumee Bay to Reno Beach   | 19   | 1830EST<br>2015EST         |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Le Reno Beach To The Islands Oh Byd 5Nm Offshore To Intl Border</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Reno Beach to The Islands  | 19   | 1830EST<br>2015EST         |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Le The Islands To Vermilion Oh Byd 5Nm Offshore To Intl Border</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| The Islands to Vermilion   | 19   | 1830EST<br>2015EST         |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Maumee Bay To Reno Beach Oh</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Maumee Bay to Reno Beach   | 19   | 1830EST<br>2015EST         |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Reno Beach To The Islands Oh</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Reno Beach to The Islands  | 19   | 1830EST<br>2015EST         |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>The Islands To Vermilion Oh</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| The Islands to Vermilion   | 19   | 1830EST<br>2015EST         |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| A line of strong thunderstorms moved east across the western basin of Lake Erie and produced wind gusts in excess of 35 knots. A 39 knot gust was measured just inland of Lake Erie. |      |                            |                           |                          |                      |         |                     |       |                    |
| <b><u>LAKE HURON</u></b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Lh Presque Isl Lt To Alabaster Mi Ewd Byd 5Nm Offshore To Intl Border</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Alpena   | 10   | 1251EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Presque Isl Lt To Sturgeon Pt Mi</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Ossineke   | 10   | 1251EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Lh Presque Isl Lt To Alabaster Mi Ewd Byd 5Nm Offshore To Intl Border</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Oscoda   | 10   | 1315EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Presque Isl Lt To Sturgeon Pt Mi</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Sturgeon Point   | 10   | 1315EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |      |                            |                           |                          |                      |         |                     |       |                    |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b>LAKE HURON</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Sturgeon Pt To<br>Alabaster Mi<br>Oscoda   | 10   | 1315EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Lh Presque Isl Lt To<br>Alabaster Mi Ewd Byd<br>5Nm Offshore To Intl<br>Border                   |      |                            |                           |                          |                      |         |                     |       |                    |
| Oscoda   | 10   | 1430EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Sturgeon Pt To<br>Alabaster Mi<br>Oscoda   | 10   | 1430EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Lh Pt Austin To Hbr<br>Beach Mi 5Nm<br>Offshore To Intl<br>Border                                |      |                            |                           |                          |                      |         |                     |       |                    |
| Port Austin  | 10   | 1530EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Pt Austin To Hbr<br>Beach Mi<br>Port Austin  | 10   | 1530EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Presque Isl Lt To<br>Sturgeon Pt Mi<br>Ossineke  | 19   | 1251EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Lh Presque Isl Lt To<br>Alabaster Mi Ewd Byd<br>5Nm Offshore To Intl<br>Border                   |      |                            |                           |                          |                      |         |                     |       |                    |
| Oscoda   | 19   | 1736EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Sturgeon Pt To<br>Alabaster Mi<br>Oscoda   | 19   | 1736EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Lh Presque Isl Lt To<br>Alabaster Mi Ewd Byd<br>5Nm Offshore To Intl<br>Border                   |      |                            |                           |                          |                      |         |                     |       |                    |
| Alpena   | 19   | 1802EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Presque Isl Lt To<br>Sturgeon Pt Mi<br>Alpena  | 19   | 1802EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| 5Nm E Of Mackinac<br>Bridge To Presque Isle<br>Lt Mi<br>Forty Mile Point                         | 19   | 1900EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Lh 5Nm E Of<br>Mackinac Bridge To<br>Presque Isl Lt Mi Ewd<br>Byd 5Nm Offshore To<br>Intl Border |      |                            |                           |                          |                      |         |                     |       |                    |
| Rogers City  | 19   | 1900EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Lh Presque Isl Lt To<br>Alabaster Mi Ewd Byd<br>5Nm Offshore To Intl<br>Border                   |      |                            |                           |                          |                      |         |                     |       |                    |
| Presque Isle Light   | 19   | 1941EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Presque Isl Lt To<br>Sturgeon Pt Mi<br>Presque Isle Light  | 19   | 1941EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002  |      |                            |                           |                          |                      |         |                     |       |                    |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|   |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b>LAKE HURON</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Inner Saginaw Bay &amp;<br/>Sw Of Pt Au Gres To<br/>Bay Port Mi</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| 10 SW Saginaw River M   | 19   | 1600EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| 10 SE Saginaw River<br>Mouth  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Outer Saginaw Bay &amp;<br/>Sw Of Alabaster To Pt<br/>Austin Mi</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| 30 SW Alabaster   | 19   | 1600EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Lh 5Nm E Of<br>Mackinac Bridge To<br>Presque Isl Lt Mi Ewd<br>Byd 5Nm Offshore To<br>Intl Border  |      |                            |                           |                          |                      |         |                     |       |                    |
| Bois Blanc Island   | 23   | 2158EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| St Ignace To False<br>Detour Channel  |      |                            |                           |                          |                      |         |                     |       |                    |
| St. Ignace  | 23   | 2158EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Straits Of Mackinac<br>Within 5Nm Of<br>Mackinac Bridge<br>Including Mackinac<br>Island   |      |                            |                           |                          |                      |         |                     |       |                    |
| Mackinac Bridge   | 23   | 2158EST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| 5Nm E Of Mackinac<br>Bridge To Presque Isle<br>Lt Mi  |      |                            |                           |                          |                      |         |                     |       |                    |
| Cheboygan   | 30   | 0410EST                    |                           |                          | 0                    | 0       |                     |       | Marine Hail        |
| Lh 5Nm E Of<br>Mackinac Bridge To<br>Presque Isl Lt Mi Ewd<br>Byd 5Nm Offshore To<br>Intl Border  |      |                            |                           |                          |                      |         |                     |       |                    |
| Cheboygan   | 30   | 0410EST                    |                           |                          | 0                    | 0       |                     |       | Marine Hail        |
| Straits Of Mackinac<br>Within 5Nm Of<br>Mackinac Bridge<br>Including Mackinac<br>Island   |      |                            |                           |                          |                      |         |                     |       |                    |
| Fort Michilimackinac  | 30   | 0410EST                    |                           |                          | 0                    | 0       |                     |       | Marine Hail        |
| <b>LAKE MICHIGAN</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Bay Of Green Bay S Of<br/>Ln Marinette To Fish<br/>Creek Wi</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| 3 ENE Oconto  | 02   | 2000CST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Thunderstorms developed along a strong cold front that moved across eastern Wisconsin and the Bay of Green Bay. These storms produced a wind gust to 45 knots at the Oconto pier head light as they moved across the bay. |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Pt Washington To<br/>North Pt Lt Wi</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Grafton   | 02   | 2115CST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| <b>Sheboygan To Pt<br/>Washington Wi</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Sheboygan   | 02   | 2120CST                    |                           |                          | 0                    | 0       |                     |       | Marine Tstm Wind   |
| Clusters and short lines of severe thunderstorms moved out over Lake Michigan.  |      |                            |                           |                          |                      |         |                     |       |                    |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## LAKE MICHIGAN

**Lm New Buffalo To  
Holland Mi 5Nm  
Offshore To Mid Line  
Of Lake**

|                         |           |                            |  |  |          |          |            |  |                         |
|-------------------------|-----------|----------------------------|--|--|----------|----------|------------|--|-------------------------|
| <b>Saugatuck Harbor</b> | <b>19</b> | <b>1245EST<br/>1312EST</b> |  |  | <b>0</b> | <b>0</b> | <b>10K</b> |  | <b>Marine Tstm Wind</b> |
|-------------------------|-----------|----------------------------|--|--|----------|----------|------------|--|-------------------------|

A 40 knot wind gust was recorded at the Benton Harbor/St. Joseph airport near the Lake Michigan coastline. Radar estimates that wind gusts to around 40 knots must also have occurred out to mid lake.

**New Buffalo To St  
Joseph Mi**

|                          |           |                            |  |  |          |          |            |  |                         |
|--------------------------|-----------|----------------------------|--|--|----------|----------|------------|--|-------------------------|
| <b>St. Joseph Harbor</b> | <b>19</b> | <b>1312EST<br/>1325EST</b> |  |  | <b>0</b> | <b>0</b> | <b>25K</b> |  | <b>Marine Tstm Wind</b> |
|--------------------------|-----------|----------------------------|--|--|----------|----------|------------|--|-------------------------|

A 40 knot wind gust was recorded near the St. Joseph harbor at the airport in Benton Harbor (near the Lake Michigan coastline).

**St Joseph To South  
Haven Mi**

|                           |           |                |  |  |          |          |            |  |                         |
|---------------------------|-----------|----------------|--|--|----------|----------|------------|--|-------------------------|
| <b>South Haven Harbor</b> | <b>19</b> | <b>1312EST</b> |  |  | <b>0</b> | <b>0</b> | <b>25K</b> |  | <b>Marine Tstm Wind</b> |
|---------------------------|-----------|----------------|--|--|----------|----------|------------|--|-------------------------|

A 40 knot wind gust was recorded at the Benton Harbor/St. Joseph airport, near the Lake Michigan coastline.

**Norwood Mi To 5Nm  
W Of Mackinac Bridge**

|                           |           |                |  |  |          |          |  |  |                   |
|---------------------------|-----------|----------------|--|--|----------|----------|--|--|-------------------|
| <b>2 S Harbor Springs</b> | <b>19</b> | <b>1654EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Waterspout</b> |
|---------------------------|-----------|----------------|--|--|----------|----------|--|--|-------------------|

**Lm 5Nm W Of  
Mackinac Bridge To  
Manistee Mi Nwd  
Beyond 5Nm Offshore  
To Mid Line Of Lake**

|                      |           |                |  |  |          |          |  |  |                         |
|----------------------|-----------|----------------|--|--|----------|----------|--|--|-------------------------|
| <b>Beaver Island</b> | <b>23</b> | <b>2000EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Marine Tstm Wind</b> |
|----------------------|-----------|----------------|--|--|----------|----------|--|--|-------------------------|

**Norwood Mi To 5Nm  
W Of Mackinac Bridge**

|                      |           |                |  |  |          |          |  |  |                         |
|----------------------|-----------|----------------|--|--|----------|----------|--|--|-------------------------|
| <b>Cross Village</b> | <b>23</b> | <b>2158EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Marine Tstm Wind</b> |
|----------------------|-----------|----------------|--|--|----------|----------|--|--|-------------------------|

**Seul Choix Pt Mi To  
5Nm W Of Mackinac  
Bridge**

|                      |           |                |  |  |          |          |  |  |                         |
|----------------------|-----------|----------------|--|--|----------|----------|--|--|-------------------------|
| <b>Pt Aux Chenes</b> | <b>23</b> | <b>2158EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Marine Tstm Wind</b> |
|----------------------|-----------|----------------|--|--|----------|----------|--|--|-------------------------|

**Norwood Mi To 5Nm  
W Of Mackinac Bridge**

|                      |           |                |  |  |          |          |  |  |                    |
|----------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>Cross Village</b> | <b>30</b> | <b>0410EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Marine Hail</b> |
|----------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|

## LAKE ST CLAIR

**Lake St Clair (U.S.  
Portion)**

|                            |           |                |  |  |          |          |  |  |                         |
|----------------------------|-----------|----------------|--|--|----------|----------|--|--|-------------------------|
| <b>20 SW Grosse Pointe</b> | <b>10</b> | <b>1801EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Marine Tstm Wind</b> |
|----------------------------|-----------|----------------|--|--|----------|----------|--|--|-------------------------|

**Lake St Clair (U.S.  
Portion)**

|                             |           |                |  |  |          |          |  |  |                         |
|-----------------------------|-----------|----------------|--|--|----------|----------|--|--|-------------------------|
| <b>6 W St. Clair Shores</b> | <b>19</b> | <b>1930EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Marine Tstm Wind</b> |
|-----------------------------|-----------|----------------|--|--|----------|----------|--|--|-------------------------|

## LOUISIANA, Northeast

NONE REPORTED.

## LOUISIANA, Northwest

**Caddo Parish**

|                    |           |                |  |  |          |          |  |  |                                |
|--------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------------------|
| <b>5 N Hosston</b> | <b>19</b> | <b>1518CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Thunderstorm Wind (G52)</b> |
|--------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------------------|

Several large trees down along Hwy 71.

## LOUISIANA, Southeast

**LAZ040-058-060>064-  
068>070** **St. Tammany - St. John The Baptist - St. Charles - Upper Jefferson - Orleans - Upper Plaquemines - Upper  
St. Bernard - Lower Jefferson - Lower Plaquemines - Lower St. Bernard**

|  |           |                            |  |  |          |          |  |  |                       |
|--|-----------|----------------------------|--|--|----------|----------|--|--|-----------------------|
|  | <b>14</b> | <b>0000CST<br/>1800CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Tropical Storm</b> |
|--|-----------|----------------------------|--|--|----------|----------|--|--|-----------------------|

Hanna developed out of a broad area of disturbed weather and low pressure in the Gulf of Mexico. A tropical depression formed from the disturbance late on September 11th in the central Gulf of Mexico and meandered slowly across the central Gulf before becoming a tropical storm on the 13th about 255 miles south southwest of Pensacola, Florida. Tropical Storm Hanna moved

# Storm Data and Unusual Weather Phenomena

September 2002

|  |   | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | September 2002        |
|--|---|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|-----------------------|
| Location   | Date  |                            |                           |                          | Killed               | Injured | Property            | Crops | Character of Storm    |
| <b><u>LOUISIANA, Southeast</u></b>                 |   |                            |                           |                          |                      |         |                     |       |                       |
|  | northwest and then north and passed over extreme southeast Louisiana near the mouth of the Mississippi River early on the 14th and made landfall near the Mississippi and Alabama border midday on the 14th with 50 mph winds.  |                            |                           |                          |                      |         |                     |       |                       |
|  | Tropical Storm Hanna was an asymmetrical storm with the strongest winds confined to the east of the center. As a result, no tropical storm force winds were observed at any land locations. Rainfall amounts were less than 1 inch and no significant flooding occurred from high tides.        |                            |                           |                          |                      |         |                     |       |                       |
| <b>Lafourche Parish</b>                            |   |                            |                           |                          |                      |         |                     |       |                       |
| <b>Port Fourchon</b>                               | 22  | 1500CST                    |                           |                          | 1                    | 2       |                     |       | <b>Rip Currents</b>   |
|  | Large swells from Hurricane Isidore, located in the extreme southeast Gulf of Mexico, caused rip tide conditions along the southeast Louisiana coast. A group of people swimming off the beach at Port Fourchon were caught in a rip tide. A 41 year old man drowned.                           |                            |                           |                          |                      |         |                     |       |                       |
|  | M411W   |                            |                           |                          |                      |         |                     |       |                       |
| <b>LAZ038-040-049&gt;050-057&gt;060-062&gt;070</b> | <b>Tangipahoa - St. Tammany - Ascension - Livingston - St. James - St. John The Baptist - Upper Lafourche - St. Charles - Orleans - Upper Plaquemines - Upper St. Bernard - Upper Terrebonne - Lower Terrebonne - Lower Lafourche - Lower Jefferson - Lower Plaquemines - Lower St. Bernard</b> |                            |                           |                          |                      |         |                     |       |                       |
|  | 25  | 1000CST                    |                           |                          | 0                    | 0       | 108.6M              |       | <b>Tropical Storm</b> |
|  | 27  | 0000CST                    |                           |                          |                      |         |                     |       |                       |
| <b>Jefferson Parish</b>                            |   |                            |                           |                          |                      |         |                     |       |                       |
| <b>Countywide</b>                                  | 25  | 1430CST                    |                           |                          | 0                    | 0       |                     |       | <b>Flash Flood</b>    |
|  | 26  | 0800CST                    |                           |                          |                      |         |                     |       |                       |
| <b>Orleans Parish</b>                              |   |                            |                           |                          |                      |         |                     |       |                       |
| <b>Countywide</b>                                  | 25  | 1430CST                    |                           |                          | 0                    | 0       |                     |       | <b>Flash Flood</b>    |
|  | 26  | 0800CST                    |                           |                          |                      |         |                     |       |                       |
| <b>St. Bernard Parish</b>                          |   |                            |                           |                          |                      |         |                     |       |                       |
| <b>Countywide</b>                                  | 25  | 1430CST                    |                           |                          | 0                    | 0       |                     |       | <b>Flash Flood</b>    |
|  | 26  | 0800CST                    |                           |                          |                      |         |                     |       |                       |
| <b>St. Charles Parish</b>                          |   |                            |                           |                          |                      |         |                     |       |                       |
| <b>Countywide</b>                                  | 25  | 1430CST                    |                           |                          | 0                    | 0       |                     |       | <b>Flash Flood</b>    |
|  | 26  | 0600CST                    |                           |                          |                      |         |                     |       |                       |
| <b>Plaquemines Parish</b>                          |   |                            |                           |                          |                      |         |                     |       |                       |
| <b>North Portion</b>                               | 25  | 1700CST                    |                           |                          | 0                    | 0       |                     |       | <b>Flash Flood</b>    |
|  | 26  | 0600CST                    |                           |                          |                      |         |                     |       |                       |
| <b>Lafourche Parish</b>                            |   |                            |                           |                          |                      |         |                     |       |                       |
| <b>North Portion</b>                               | 25  | 1800CST                    |                           |                          | 0                    | 0       |                     |       | <b>Flash Flood</b>    |
|  | 26  | 0600CST                    |                           |                          |                      |         |                     |       |                       |
| <b>Lafourche Parish</b>                            |   |                            |                           |                          |                      |         |                     |       |                       |
| <b>1 S Golden Meadow to Golden Meadow</b>          | 25  | 2330CST                    | 0.5                       | 50                       | 0                    | 0       |                     |       | <b>Tornado (F1)</b>   |
|  | 26  | 2330CST                    |                           |                          |                      |         |                     |       |                       |

A tornado touched down briefly causing damage to two autos and several storage buildings.

Tropical Storm Isidore moved steadily northward across the central Gulf of Mexico on September 24 and September 25, 2002 before moving ashore near Grand Isle early on the morning on Thursday, September 26, 2002. The tropical storm moved steadily north across southeast Louisiana and by the afternoon of September 26 was located in central Mississippi downgraded to a tropical depression. Tropical Storm Isidore had a large circulation with tropical storm force winds extending several hundreds of miles from its center. Prior to moving onto the Yucatan Peninsula earlier in the week and weakening, Isidore was classified as a major hurricane. Swells from the distant hurricane resulted in rip tides along the northern Gulf of Mexico, with a 41 year old man drowning on the afternoon of Sunday, Sept 22, 2002 at Port Fourchon, Lafouche Parish.

The large circulation caused a significant storm surge over a large area for a tropical storm. Tide levels were 4 to 6 feet above normal across much of southeast Louisiana from Grand Isle eastward to the Pearl River. Storm surge flooding occurred outside of the hurricane protection levees across Lafourche, Jefferson, Plaquemine, St. Bernard, and Orleans Parishes, inundating roadways and flooding some non-elevated structures. Across Lake Pontchartrain and Lake Maurepas, storm surge of 4 to 5 feet above normal were measured. Low lying areas, roadways and some non-elevated structures in parishes surrounding Lake Pontchartrain and Maurepas were flooded. St. Tammany Parish was particularly hard hit with storm surge flooding when the Isidore moved north of the area, and the winds shifted to a southwest direction causing water levels to rapidly increase along the north shore of Lake Pontchartrain on the morning of Thursday, September 26, 2000. The storm surge overtopped or breached a small local levee system in southern portions of Slidell causing water to flood several hundred homes. Approximately 1000 homes were flooded in the parish from either storm surge, river flooding, or from flooding from heavy rain

Rainbands associated with Tropical Storm Isidore produced heavy rainfall in a wide area prior to and shortly after landfall. The greater New Orleans area, was particularly hard hit on the late afternoon and early evening Wednesday, September 25, 2002. Four to eight inches of rainfall occurred within 6 hours time. Drainage systems were overwhelmed by the heavy rain and numerous

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## LOUISIANA, Southeast

streets were flooded, automobiles were flooded, and water entered some homes. Portions of Terrebonne and Lafourche Parishes were also hard hit during the early morning of Thursday, September 26, 2002 with homes flooded when heavy rainfall overwhelmed drainage. Between 200 and 300 homes and businesses were reported flooded in Terrebonne Parish. Storm total rainfall of 10 to 15 inches were common across southeast Louisiana.

Most areas recorded sustained winds of 35 to 45 mph with some gusts to 50 mph in squalls. The highest wind speeds were observed near the coast or tidal lakes. Grand Isle, on the coast, recorded the highest wind gust of 71 mph.

A tornado touched down near Golden Meadow, Lafourche Parish, where a couple of sheriff's office patrol cars were damaged along with several storage buildings.

The Louisiana Office of Emergency Preparedness reported approximately 2500 people sought refuge in approximately 40 shelters in the state.

As of late November 2002, the Louisiana State Insurance Department reported that insurance industry has indicated that Tropical Storm Isidore had resulted in \$105 million in insured losses. Approximately 166,200 claims had been filed with private insurance companies.

A reliable estimate of uninsured losses had not been determined as of the end of November 2002.

## LOUISIANA, Southwest

### Allen Parish

#### Oakdale

|    |         |   |   |    |                   |
|----|---------|---|---|----|-------------------|
| 19 | 2100CST | 0 | 0 | 5K | Thunderstorm Wind |
|----|---------|---|---|----|-------------------|

High winds uprooted a huge oak tree on Perry Street in Oakdale. The tree pulled down power lines and blocked the street.

#### LAZ051>054

### Cameron - Vermilion - Iberia - St. Mary

|    |         |   |   |     |      |                |
|----|---------|---|---|-----|------|----------------|
| 25 | 0000CST | 0 | 0 | 70K | 3.7M | Tropical Storm |
| 26 | 1800CST |   |   |     |      |                |

Tropical Storm Isidore stayed well east of the region, but did minor damage along coastal areas of southwest Louisiana. In Cameron Parish, tides ran around 2 feet above normal, resulting in minor beach erosion between Johnson Bayou and Holly Beach. Minor street flooding occurred in downtown Cameron when water was unable to drain into the Gulf. Further east, in Vermilion, Iberia, and St. Mary parishes, the main effect was thousands of acres of damaged sugarcane. The stalks were bent down, which resulted in diminished sugar production at the end of the season. Winds estimated in the 40 to 60 mph range contributed to the damage of the sugarcane stalks.

## MAINE, North

### MEZ006-011-015>017-032

### Southeast Aroostook - Central Penobscot - Southern Penobscot - Interior Hancock - Central Washington - Northern Washington

|    |         |   |   |                 |
|----|---------|---|---|-----------------|
| 11 | 1930EST | 0 | 0 | High Wind (G45) |
| 12 | 1000EST |   |   |                 |

Intense low pressure moving through the Gulf of Maine produced strong winds across the region. Sustained winds of 20 to 30 mph...with gusts of 40 to 50 mph were common. Even stronger winds were reported over the Gulf of Maine with wind gusts to around 55 mph. The strong winds brought down many large tree limbs along with trees and power lines which contributed to numerous power outages. Shingles were blown off several homes and some signs were blown over.

## MAINE, South

### MEZ007>009-012>014-018>028

### Northern Oxford - Northern Franklin - Central Somerset - Southern Oxford - Southern Franklin - Southern Somerset - Interior York - Interior Cumberland - Androscoggin - Kennebec - Interior Waldo - Coastal York - Coastal Cumberland - Sagadahoc - Lincoln - Knox - Coastal Waldo

|    |         |   |   |              |
|----|---------|---|---|--------------|
| 11 | 1600EST | 1 | 0 | Strong Winds |
| 12 | 0100EST |   |   |              |

Strong and gusty, northwest winds developed behind a cold front that moved through the area. A 35 year-old construction worker was killed when the wind blew down a wall under construction at a high school in Windham around 5 pm. Winds also blew down trees and limbs onto power lines in many locations, causing scattered power outages. About 19,000 customers experienced power outages. Peak wind gusts were measured at 45 mph in Augusta, 43 mph in Sanford, and 40 mph in Portland. M35SC

## MARYLAND, Central

### Allegany County

#### Oldtown

|    |         |   |   |    |                   |
|----|---------|---|---|----|-------------------|
| 27 | 1320EST | 0 | 0 | 2K | Thunderstorm Wind |
|----|---------|---|---|----|-------------------|

Trees were downed.

### Frederick County

#### Myersville

|    |         |   |   |    |                   |
|----|---------|---|---|----|-------------------|
| 27 | 1700EST | 0 | 0 | 2K | Thunderstorm Wind |
|----|---------|---|---|----|-------------------|

Trees were downed.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## MARYLAND, Central

### Carroll County Countywide

27 1730EST 0 0 5K Thunderstorm Wind

Trees were downed.

Scattered thunderstorms with high winds moved through Western and Central Maryland between 4:00 and 8:30 PM EDT. In Allegany County, trees were downed in Oldtown. In Frederick County, trees were downed in Myersville. In Carroll County, county officials reported downed trees in Union Bridge and other scattered locations.

## MARYLAND, Northeast

### MDZ008-012-015- 019>020 Cecil - Kent - Queen Annes - Talbot - Caroline

01 0000EST 0 0 Drought  
30 2359EST

Precipitation returned to normal (even above normal levels in the southern Eastern Shore) during September across the Maryland Eastern Shore. Other than late planted soybeans, it was too late to help most crops. In early September streamflow and groundwater levels set many daily, monthly and even some all time record low levels. Ponds were going dry in Cecil County. Waiting lists existed for well drillers. There was an increase in brush fires. The continued lack of precipitation prompted Governor Parris N. Glendening to declare a drought emergency across the entire Eastern Shore and implemented level two water restrictions during late August. The governor also issued an Executive Order that banned all debris burning. He also expanded the eligibility requirements of the State's Cover Crop Program to help farmers cope with the drought. The governor also requested a federal disaster declaration to assist farmers. Statewide, the estimated corn harvest of 33.2 million bushels was expected to be lowest since 1993. Some corn was in such bad shape in Cecil County that it was used for silage instead of human consumption. The estimated soybean yield was no better. The estimated harvest of 10.6 million bushels was the lowest since 1987 and the lowest per acre yield since 1966. Some farmers were expecting the worst pumpkin crop in 20 years. Many were expected to be softball size instead of pumpkin size. September monthly precipitation on a county weighted average ranged from 3.8 inches in Cecil County to 7.3 inches in Talbot County. Normal is around 3.7 inches. At the Baltimore-Washington International Airport, September monthly precipitation was 3.17 inches, 0.81 inches below normal.

### Queen Anne'S County Grasonville

01 1630EST 0 0 Flash Flood  
1730EST

Bands of persistent heavy rain caused poor drainage flooding in the Maryland Eastern Shore as well as flooding of creeks and roadways in Queen Anne's County. The most road closures were reported in Grasonville. Storm totals included 5.60 inches in Easton (Talbot County), 4.75 inches in Church Hill (Queen Anne's County), 3.97 inches in Royal Oak (Talbot County), 3.80 inches in Federalsburg (Caroline County), 2.91 inches in Stevensville (Queen Anne's County), 2.76 inches in Chestertown (Kent County) and 2.30 inches in Worton (Kent County). Wind gusts to around 30 mph and the heavy rain pushed over some shallow trees and broke some tree branches during the morning of the 1st.

### MDZ008-012-015- 019>020 Cecil - Kent - Queen Annes - Talbot - Caroline

11 0800EST 0 0 Wind  
1800EST

The pressure difference between a strong high pressure system in the central part of the country and Tropical Storm Gustav located well east of the Delmarva Peninsula produced strong gusty northwest winds throughout the day on the 11th. The strongest gusts occurred during the early afternoon and averaged around 40 mph. The winds pulled down tree limbs and caused power outages to about 3,000 Conectiv Power Delivery customers. All power was restored by the evening of the 11th. Peak wind gusts included 44 mph in Tolchester Beach (Kent County), 37 mph in Salisbury (Wicomico County) and 36 mph at the Baltimore-Washington International Airport.

## MARYLAND, South

### Worcester County Ocean City to Snow Hill

01 0930EST 0 0 Flash Flood  
1700EST

Numerous roads and bridges reported closed due to flooding between Ocean City, Berlin, Newark, and Snow Hill. Cooperative observer at Snow Hill reported just over 14 inches of rain.

### Wicomico County Wango to Powellville

01 1250EST 0 0 Flash Flood  
1700EST

Portions of Ben Davis Road and Wango Road closed due to high water. In Wango, bridge on Bear Swamp Road washed out.

## MARYLAND, West

### Garrett County Mc Henry

27 1455EST 0 0 Thunderstorm Wind (G50)

## MASSACHUSETTS, Central and East

### Bristol County Dartmouth

04 0645EST 0 0 15K Lightning

Lightning from an early morning thunderstorm struck two homes, and caused a widespread equipment failure at the Dartmouth

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## MASSACHUSETTS, Central and East

police station. There were no injuries.

**MAZ005>007-009-011-017-020 Western Middlesex - Western Essex - Eastern Essex - Western Hampden - Eastern Hampden - Northern Bristol - Southern Bristol**

**11 1130EST 0 1 240K High Wind**  
**2100EST**

High winds buffeted parts of Massachusetts, as a result of Hurricane Gustav passing several hundred miles southeast of New England and high pressure over southern Canada. Although wind speeds were measured as high as 50 mph, there were numerous reports of downed trees and branches which took down power lines and disrupted service to about twelve thousand electric customers. The damage was likely due to weakened root systems, as a result of the longer term drought being felt over much of the northeast, in addition to the fact that most trees still had their leaves.

The majority of wind damage occurred in the Merrimack Valley where about seven thousand customers lost electricity. One injury was attributed to the high winds. A man was mowing his lawn in Acton when he was hit by a falling tree. In Bristol County, most of the town of Rehoboth lost power, and trees were reported down at many locations. Falling tree limbs damaged two cars in Attleboro.

### **Bristol County**

**Rehoboth to 15 1700EST 0 0 Heavy Rain**  
**Taunton 16 0800EST**

### **Norfolk County**

**Wrentham to 15 1700EST 0 0 Heavy Rain**  
**Randolph 16 0800EST**

### **Plymouth County**

**Brockton to 15 1700EST 0 0 Heavy Rain**  
**West Bridgewater 16 0800EST**

Bands of showers and isolated thunderstorms brought heavy rain to parts of eastern Massachusetts. The heavy rain was attributed to the remnants of Tropical Storm Hanna interacting with an eastward moving cold front. Rainfall totals of 2 to 3 inches were common throughout Norfolk, Bristol, and Plymouth Counties.

Some specific totals include 3.75 inches in Taunton, 3.32 inches in Rehoboth, 2.52 inches in Randolph, 2.50 inches in West Bridgewater, and 2.28 inches in Wrentham. No flooding was reported, aside from minor flooding due to poor drainage.

### **Barnstable County**

**Pocasset to 22 2000EST 0 0 Heavy Rain**  
**Wellfleet 23 1100EST**

### **Bristol County**

**South Attleboro to 22 2000EST 0 0 Heavy Rain**  
**Taunton 23 1100EST**

### **Essex County**

**Haverhill to 22 2000EST 0 0 Heavy Rain**  
**Beverly 23 1100EST**

### **Middlesex County**

**Billerica 22 2000EST 0 0 Heavy Rain**  
**23 1100EST**

### **Norfolk County**

**Foxborough to 22 2000EST 0 0 Heavy Rain**  
**Randolph 23 1100EST**

### **Plymouth County**

**Marshfield to 22 2000EST 0 0 Heavy Rain**  
**Duxbury 23 1100EST**

### **Worcester County**

**West Warren 22 2000EST 0 0 Heavy Rain**  
**23 1100EST**

Tropical moisture associated with a slow moving cold front brought heavy rain to much of central and eastern Massachusetts. The highest storm totals, on the order of 2 to 3 inches, were reported on Cape Cod. No flooding was reported as a result of the rainfall, aside from the usual minor flooding in poor drainage areas.

Some specific totals include 3.04 inches in Pocasset, 2.91 inches in Chatham, 2.87 inches in West Warren, 2.80 inches in Sandwich, 2.48 inches in Beverly, 2.45 inches in Randolph, 2.32 inches in South Attleboro, and 2.25 inches in Billerica.

## MASSACHUSETTS, West

NONE REPORTED.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## MICHIGAN, East

**MIZ047>049-053>055-060>063-068>070-075>076-082>083** **Midland - Bay - Huron - Saginaw - Tuscola - Sanilac - Shiawassee - Genesee - Lapeer - St. Clair - Livingston - Oakland - Macomb - Washtenaw - Wayne - Lenawee - Monroe**

**01 0000EST 0 0 Drought**  
**30 0000EST**

The month of September turned out to be like much of the summer of 2002 was, hot and dry. The dry weather was especially severe from the northern suburbs of Detroit to the Tri Cities and thumb. The monthly rainfall total of 0.29 inches recorded at Flint Bishop airport was the lowest ever recorded for September, making the month the driest September on record for the city of Flint. The 0.39 inches recorded in Saginaw made it the second driest September on record. Flint, Saginaw and Detroit metro airport received less than .05 inches of precipitation during the first half of the month. The dryness was only worsened by the heat. Several record highs were set throughout eastern Michigan during the month of September. After an extremely hot and dry July and August, the weather of September 2002 only exasperated drought conditions. During the first half of the month, hundreds of communities across the area were under water restrictions. Hardest hit from the drought was the agricultural industry. September yields across most of the area were estimated at under 50 percent and many counties across eastern Michigan were declared agricultural disaster areas. At the time of this publication, an estimate of monetary damages due to crop loss was not available.

### **Huron County**

**Port Austin 10 1530EST 0 0 50K Thunderstorm Wind (G52)**

Storm spotters reported that a large tree was uprooted and blown onto a house in thunderstorms winds. The house sustained extensive damage.

### **Huron County**

**Bay Port 10 1535EST 0 0 20K Thunderstorm Wind (G55)**

A grain silo sustained some minor damage from thunderstorm winds. Some windows were also reported to have been blown out of a barn.

### **Huron County**

**1 NW Owendale 10 1555EST 0 0 30K Thunderstorm Wind (G50)**

Emergency management reported several trees and power lines blown onto the road in thunderstorm winds. The roof and west wall of a barn was also reportedly blown off in thunderstorm winds.

### **Shiawassee County**

**3 S Laingsburg 10 1557EST 0 0 15K Thunderstorm Wind (G52)**

Trained spotters and broadcast media reported several large trees blown down, some of which blocked roadways. One tree limb landed on a house, while another house lost its chimney.

### **Livingston County**

**5 S Fowlerville 10 1600EST 0 0 Thunderstorm Wind (G50)**

Spotters reported that several large trees were blown down in thunderstorm winds.

### **Lapeer County**

**5 N Lapeer 10 1615EST 0 0 Thunderstorm Wind (G50)**

An off duty NWS employee reported several large trees and tree branches blown down in thunderstorm winds.

### **Livingston County**

**3 S Howell 10 1615EST 0 0 Thunderstorm Wind (G50)**

Livingston County Central Dispatch reported that several large trees were blown down in thunderstorm winds.

### **Shiawassee County**

**1 N Morrice 10 1615EST 0 0 75K Lightning**

Ligthning struck a barn and set it on fire. The barn was heavily damaged.

### **Shiawassee County**

**Morrice 10 1615EST 0 0 50K Thunderstorm Wind (G52)**

A newspaper reported that several large trees and tree limbs were blown down in thunderstorm winds, some of which fell onto homes.

### **Shiawassee County**

**3 W Perry 10 1615EST 0 0 Thunderstorm Wind (G55)**

Spotters reported that three large trees were blown down.

### **Livingston County**

**5 SE Brighton 10 1630EST 0 0 Thunderstorm Wind (G50)**

Law enforcement reported that numerous one foot diameter trees were blown down in Green Oak Township due to thunderstorm winds.

### **St. Clair County**

**Capac 10 1700EST 0 0 Thunderstorm Wind (G52)**

A trained spotter estimated 60 MPH thunderstorm winds.

### **Washtenaw County**

**Chelsea 10 1720EST 0 0 Thunderstorm Wind (G50)**

Spotters reported that three large trees were blown down onto power lines.

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |      |                            |                           |                          |                      |   |                     |  |                                      |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|--|--------------------------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |  | Character of Storm                   |
| <b><u>MICHIGAN, East</u></b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>St. Clair County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Yale   | 10   | 1900EST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50)              |
| St Clair County Central Dispatch reported that power lines were blown down in thunderstorm winds.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>St. Clair County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Jeddo  | 10   | 1910EST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50)              |
| Trained spotters reported a large tree blown down in thunderstorm winds.   |      |                            |                           |                          |                      |   |                     |  |                                      |
| After several days of record warmth, a strong cold front moved through eastern Michigan during the afternoon of the 10th. Due to some dry air situated below the bases of the storm clouds, evaporational cooling increased the downdraft strength of many of the thunderstorms. This caused some of the storms to produce very strong wind gusts, some of which caused damage. Hundreds of power outages were blamed on these thunderstorms. The more widespread outages in eastern Michigan occurred across portions of Shiawassee, Huron and Livingston counties. |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Shiawassee County</b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| Perry  | 19   | 1538EST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.88)                          |
| <b>Midland County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 7 SW Midland   | 19   | 1550EST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52)              |
| Trained spotters reported that thunderstorm winds uprooted and blown onto Brooks Road near Meridian Road in Mount Haley Township.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Bay County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 5 SW Bay City  | 19   | 1600EST                    |                           |                          | 0                    | 0 | 25K                 |  | Thunderstorm Wind (G52)              |
| Law enforcement reported that several large trees were blown down and that several garage doors were blown in due to thunderstorm winds.   |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Midland County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Midland  | 19   | 1600EST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50)              |
| Law enforcement reported numerous trees blown down in thunderstorm winds.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Saginaw County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Saginaw  | 19   | 1600EST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50)              |
| The newspaper reported that thunderstorm winds blew down a large tree and several large branches in residential areas near the downtown.   |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Bay County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 1 N Essexville   | 19   | 1605EST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G54) <sup>M</sup> |
| <b>Bay County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 1 NE Willard   | 19   | 1605EST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50)              |
| Spotters reported that thunderstorms blew several large tree limbs onto the road.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Lenawee County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 3 S Adrian   | 19   | 1715EST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50)              |
| Spotters reported several large tree limbs blown down in thunderstorm winds.   |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Washtenaw County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Ann Arbor  | 19   | 1755EST                    |                           |                          | 1                    | 2 |                     |  | Lightning                            |
| Three men were installing a roof at an apartment complex under construction when they were struck by lightning. Two of the men were injured, while the third was later pronounced dead. M34LS  |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Livingston County</b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| 4 NE Brighton  | 19   | 1757EST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52)              |
| A spotter reported that a large tree was blown over in thunderstorm winds.   |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Oakland County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 2 W Milford  | 19   | 1802EST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50)              |
| Spotters reported several six inch diameter tree limbs blown down in thunderstorm winds.   |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Washtenaw County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 1 SW Whittaker   | 19   | 1806EST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50)              |
| Spotters reported that thunderstorm winds blew several eight inch diameter tree limbs down.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Monroe County</b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| Lambertville   | 19   | 1830EST                    |                           |                          | 0                    | 0 | 2K                  |  | Thunderstorm Wind (G50)              |
| Spotters reported that thunderstorm winds blew over a half a dozen telephone poles.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Monroe County</b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| Temperance   | 19   | 1830EST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50)              |
| Spotters reported several large trees blown down in thunderstorm winds.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>St. Clair County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Algonac to<br>2 SW Algonac   | 19   | 1945EST                    |                           |                          | 0                    | 0 | 100K                |  | Thunderstorm Wind (G55)              |
| The media and trained spotters reported numerous large trees blown down in Algonac and on Harsens Island. One tree fell onto the roof of a home. A pickup truck was destroyed by a fallen tree. Two tool sheds were also destroyed by fallen trees.  |      |                            |                           |                          |                      |   |                     |  |                                      |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## MICHIGAN, East

An upper air disturbance move across Lower Michigan during the late afternoon and evening hours on the 19th. This disturbance combined with unseasonably warm and humid air across Lower Michigan to trigger widespread thunderstorms. These thunderstorms initially moved into the Saginaw Valley during the late afternoon hours. During the evening, another round of thunderstorms moved from south to north across the region. Some of these thunderstorms were severe with damaging wind gusts.

## MICHIGAN, Extreme Southwest

### St. Joseph County

Sturgis to  
Colon

|    |         |  |  |  |   |   |   |  |                   |
|----|---------|--|--|--|---|---|---|--|-------------------|
| 19 | 1635EST |  |  |  | 0 | 0 | 0 |  | Thunderstorm Wind |
|    | 1645EST |  |  |  |   |   |   |  |                   |

Law enforcement reported trees were reported down on the road in Sturgis, Nottam and Colon.

### Branch County

Bronson to  
Sherwood

|    |         |  |  |  |   |   |   |  |                   |
|----|---------|--|--|--|---|---|---|--|-------------------|
| 19 | 1650EST |  |  |  | 0 | 0 | 0 |  | Thunderstorm Wind |
|    | 1657EST |  |  |  |   |   |   |  |                   |

Law enforcement reported trees down.

## MICHIGAN, North

### Alcona County

Harrisville

|    |         |  |  |  |   |   |  |  |                         |
|----|---------|--|--|--|---|---|--|--|-------------------------|
| 10 | 1310EST |  |  |  | 0 | 0 |  |  | Thunderstorm Wind (G55) |
|----|---------|--|--|--|---|---|--|--|-------------------------|

Telephone pole blown over and several large branches down.

### Iosco County

Oscoda

|    |         |  |  |  |   |   |  |  |                         |
|----|---------|--|--|--|---|---|--|--|-------------------------|
| 10 | 1430EST |  |  |  | 0 | 0 |  |  | Thunderstorm Wind (G50) |
|----|---------|--|--|--|---|---|--|--|-------------------------|

A few trees down.

A line of thunderstorms moved through northern Michigan during the afternoon on the 10th. A couple of the storms produced severe wind gusts.

### Arenac County

Alger

|    |         |  |  |  |   |   |  |  |                         |
|----|---------|--|--|--|---|---|--|--|-------------------------|
| 19 | 1630EST |  |  |  | 0 | 0 |  |  | Thunderstorm Wind (G50) |
|----|---------|--|--|--|---|---|--|--|-------------------------|

A few trees down.

### Ogemaw County

3 SE West Branch

|    |         |  |  |  |   |   |  |  |                         |
|----|---------|--|--|--|---|---|--|--|-------------------------|
| 19 | 1654EST |  |  |  | 0 | 0 |  |  | Thunderstorm Wind (G50) |
|----|---------|--|--|--|---|---|--|--|-------------------------|

A few trees down.

### Alcona County

6 N Glennie

|    |         |  |  |  |   |   |  |  |                         |
|----|---------|--|--|--|---|---|--|--|-------------------------|
| 19 | 1730EST |  |  |  | 0 | 0 |  |  | Thunderstorm Wind (G50) |
|----|---------|--|--|--|---|---|--|--|-------------------------|

Numerous trees down.

A line of thunderstorms moved through northern Michigan during early evening hours on the 19th. A few of the thunderstorms produced severe wind gusts.

## MICHIGAN, Upper

### Baraga County

2 S L Anse

|    |         |  |  |  |   |   |  |  |                         |
|----|---------|--|--|--|---|---|--|--|-------------------------|
| 02 | 1818EST |  |  |  | 0 | 0 |  |  | Thunderstorm Wind (G55) |
|    | 1950EST |  |  |  |   |   |  |  |                         |

Two to three inch diameter tree branches were broken off.

### Marquette County

Big Bay

|    |         |  |  |  |   |   |  |  |                         |
|----|---------|--|--|--|---|---|--|--|-------------------------|
| 02 | 1905EST |  |  |  | 0 | 0 |  |  | Thunderstorm Wind (G55) |
|----|---------|--|--|--|---|---|--|--|-------------------------|

Large tree branches were broken off.

A cold front that moved across Lake Superior and Michigan's Upper Peninsula during the evening triggered a line of thunderstorms. A few of these storms produced damaging winds.

### Dickinson County

Iron Mtn

|    |         |  |  |  |   |   |  |  |             |
|----|---------|--|--|--|---|---|--|--|-------------|
| 30 | 1500CST |  |  |  | 0 | 0 |  |  | Flash Flood |
|    | 1700CST |  |  |  |   |   |  |  |             |

A foot of water was reported over highway US-2 from torrential rain.

### Iron County

8 S Crystal Falls

|    |         |  |  |  |   |   |  |  |             |
|----|---------|--|--|--|---|---|--|--|-------------|
| 30 | 1816EST |  |  |  | 0 | 0 |  |  | Hail (0.75) |
|----|---------|--|--|--|---|---|--|--|-------------|

Three quarter inch diameter hail was reported.

### Dickinson County

Kingsford to  
Iron Mtn

|    |         |     |     |  |   |   |    |  |              |
|----|---------|-----|-----|--|---|---|----|--|--------------|
| 30 | 1911EST | 4.5 | 200 |  | 0 | 0 | 1M |  | Tornado (F1) |
|    | 1917EST |     |     |  |   |   |    |  |              |

This tornado developed over northeast Florence County, WI (See Storm Data for Wisconsin, Northeastern, for more information on the beginning portion of this tornado) and crossed the Menominee River just south of the Iron Mountain-Kingsford airport. The storm moved east-northeast into Kingsford and Iron Mountain. As the storm moved into Iron Mountain, the track shifted more to the east and the damage path became more sporadic before the tornado lifted completely on the east side of Iron Mountain. Numerous trees and power lines were knocked down, blocking highway US-2 and disrupting electric power and telephone service. Gas lines were ruptured and several commercial buildings sustained substantial roof damage in Kingsford.

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002                        |      |   |                           |                          |                      |         |                     |       |                         |
|---------------------------------------|------|---|---------------------------|--------------------------|----------------------|---------|---------------------|-------|-------------------------|
| Location                              | Date | Time<br>Local/<br>Standard  | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm      |
|                                       |      |   |                           |                          | Killed               | Injured | Property            | Crops |                         |
| <b><u>MICHIGAN, Upper</u></b>         |      |   |                           |                          |                      |         |                     |       |                         |
| <b>Dickinson County</b>               |      |   |                           |                          |                      |         |                     |       |                         |
| <b>Kingsford</b>                      | 30   | 1913EST   |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G60) |
|                                       |      | Power lines were knocked down.  |                           |                          |                      |         |                     |       |                         |
| <b>Dickinson County</b>               |      |   |                           |                          |                      |         |                     |       |                         |
| <b>Iron Mtn</b>                       | 30   | 1918EST   |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
|                                       |      | Three quarter inch diameter hail was reported.  |                           |                          |                      |         |                     |       |                         |
| <b>Dickinson County</b>               |      |   |                           |                          |                      |         |                     |       |                         |
| <b>Iron Mtn</b>                       | 30   | 1919EST   |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G70) |
|                                       |      | Numerous trees were knocked down.   |                           |                          |                      |         |                     |       |                         |
| <b>Dickinson County</b>               |      |   |                           |                          |                      |         |                     |       |                         |
| <b>Quinnesec to<br/>2 NW Norway</b>   | 30   | 1919EST<br>1923EST  | 3                         | 100                      | 0                    | 0       |                     |       | Tornado (F0)            |
|                                       |      | This tornado developed on the east side of Quinnesec along U.S. 2, and tracked to the east-southeast along the north side of the highway to just west-northwest of Norway. Damage was limited to minor roof damage (lifted shingles) in Quinnesec, trees downed and numerous branches broken.   |                           |                          |                      |         |                     |       |                         |
| <b>Dickinson County</b>               |      |   |                           |                          |                      |         |                     |       |                         |
| <b>Quinnesec</b>                      | 30   | 1922EST   |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G70) |
|                                       |      | Numerous trees were knocked down.   |                           |                          |                      |         |                     |       |                         |
| <b>Dickinson County</b>               |      |   |                           |                          |                      |         |                     |       |                         |
| <b>5 NE Norway to<br/>6 NE Norway</b> | 30   | 1925EST<br>1927EST  | 0.8                       | 100                      | 0                    | 0       |                     |       | Tornado (F0)            |
|                                       |      | This tornado touched down approximately 5 miles northeast of Norway, crossing the Norway Truck Trail Road before dissipating 1/4 mile east of the road crossing. Damage was limited to downed trees and broken branches.  |                           |                          |                      |         |                     |       |                         |
| <b>Menominee County</b>               |      |   |                           |                          |                      |         |                     |       |                         |
| <b>2.5 E La Branch</b>                | 30   | 1958EST   |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G70) |
|                                       |      | A 10 inch diameter tree was blown down.   |                           |                          |                      |         |                     |       |                         |
| <b>Ontonagon County</b>               |      |   |                           |                          |                      |         |                     |       |                         |
| <b>Ewen</b>                           | 30   | 2018EST   |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
|                                       |      | Three quarter inch diameter hail was reported.  |                           |                          |                      |         |                     |       |                         |
| <b>Baraga County</b>                  |      |   |                           |                          |                      |         |                     |       |                         |
| <b>Covington</b>                      | 30   | 2045EST   |                           |                          | 0                    | 0       |                     |       | Hail (1.75)             |
|                                       |      | Golf ball sized hail was reported.  |                           |                          |                      |         |                     |       |                         |
| <b>Marquette County</b>               |      |   |                           |                          |                      |         |                     |       |                         |
| <b>Republic</b>                       | 30   | 2048EST   |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
|                                       |      | Three quarter inch diameter hail was reported.  |                           |                          |                      |         |                     |       |                         |
|                                       |      | On Sep 30, a short wave moving from the plains into south central Canada brought a warm front into Michigan's Upper Peninsula. Scattered thunderstorms developed along the front, with several of these storms becoming severe. One supercell that originally developed in an area of higher shear over northern Wisconsin produced three tornadoes and extensive downburst wind damage in southern Dickinson County when it encountered an outflow boundary from earlier convection. |                           |                          |                      |         |                     |       |                         |
|                                       |      | The majority of damage to the Iron Mountain, Kingsford and Quinnesec areas was caused by downburst winds, which knocked trees into homes, downed power lines, etc. The most significant damage was produced by the tornado that moved through Kingsford and Iron Mountain.  |                           |                          |                      |         |                     |       |                         |
| <b><u>MICHIGAN, West</u></b>          |      |   |                           |                          |                      |         |                     |       |                         |
| <b>Kent County</b>                    |      |   |                           |                          |                      |         |                     |       |                         |
| <b>Byron Center to<br/>Caledonia</b>  | 03   | 0140EST<br>0145EST  |                           |                          | 0                    | 0       | 10K                 |       | Thunderstorm Wind (G53) |
|                                       |      | Several trees and large limbs were blown down by thunderstorm wind gusts in Byron Center, as reported by area law enforcement. A large tree was also blown down in Caledonia.   |                           |                          |                      |         |                     |       |                         |
| <b>Ingham County</b>                  |      |   |                           |                          |                      |         |                     |       |                         |
| <b>Lansing</b>                        | 10   | 1530EST   |                           |                          | 0                    | 0       | 10K                 |       | Thunderstorm Wind (G53) |
|                                       |      | Thunderstorm wind gusts blew down several trees in the south side of Lansing.   |                           |                          |                      |         |                     |       |                         |
| <b>Clinton County</b>                 |      |   |                           |                          |                      |         |                     |       |                         |
| <b>Bath</b>                           | 10   | 1610EST   |                           |                          | 0                    | 0       | 40K                 | 0     | Thunderstorm Wind (G60) |
|                                       |      | Three barns were blown down by thunderstorm wind gusts near the intersection of Cutler and Hollister roads. Several large trees were also blown down three miles northeast of Bath along Cutler road between Upton and Hollister roads.   |                           |                          |                      |         |                     |       |                         |
| <b>Jackson County</b>                 |      |   |                           |                          |                      |         |                     |       |                         |
| <b>Parma to<br/>Jackson</b>           | 10   | 1616EST<br>1633EST  |                           |                          | 0                    | 0       | 20K                 |       | Thunderstorm Wind (G53) |
|                                       |      | Several trees were blown down in Parma and also in Jackson by thunderstorm wind gusts, as reported by local law enforcement.  |                           |                          |                      |         |                     |       |                         |

# Storm Data and Unusual Weather Phenomena

September 2002

|  |      |                            |                           |                          |                      |   |                     |  | September 2002          |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|--|-------------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |  | Character of Storm      |
|  |      |                            |                           |                          |                      |   |                     |  |                         |
| <b><u>MICHIGAN, West</u></b>   |      |                            |                           |                          |                      |   |                     |  |                         |
| <b>Allegan County</b>  |      |                            |                           |                          |                      |   |                     |  |                         |
| Saugatuck to<br>Allegan  | 19   | 1410EST<br>1415EST         |                           |                          | 0                    | 0 | 20K                 |  | Thunderstorm Wind (G53) |
| Several trees were blown down in Saugatuck and Allegan by thunderstorm wind gusts, as reported by area law enforcement.  |      |                            |                           |                          |                      |   |                     |  |                         |
| <b>Eaton County</b>  |      |                            |                           |                          |                      |   |                     |  |                         |
| Grand Ledge to<br>Pottersville   | 19   | 1430EST                    |                           |                          | 0                    | 0 | 10K                 |  | Thunderstorm Wind (G53) |
| Law enforcement reported that several trees were blown down by thunderstorm wind gusts in Grand Ledge. One inch hail was reported by a spotter in Pottersville.  |      |                            |                           |                          |                      |   |                     |  |                         |
| <b>Isabella County</b>   |      |                            |                           |                          |                      |   |                     |  |                         |
| Mt Pleasant  | 19   | 1548EST<br>1608EST         |                           |                          | 0                    | 0 | 10K                 |  | Thunderstorm Wind (G53) |
| Several trees were blown down two miles east of Mt. Pleasant. One tree was also blown down four miles south of Mt. Pleasant, and another tree was blown down five miles north of Weidman. All reports were received from area law enforcement. |      |                            |                           |                          |                      |   |                     |  |                         |
| <b><u>MINNESOTA, Central and South Central</u></b>   |      |                            |                           |                          |                      |   |                     |  |                         |
| <b>Kanabec County</b>  |      |                            |                           |                          |                      |   |                     |  |                         |
| 3 SE Woodland  | 01   | 0940CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Morrison County</b>   |      |                            |                           |                          |                      |   |                     |  |                         |
| 2 W Pierz  | 01   | 1055CST<br>1100CST         |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Pope County</b>   |      |                            |                           |                          |                      |   |                     |  |                         |
| Glenwood   | 01   | 1150CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Mille Lacs County</b>   |      |                            |                           |                          |                      |   |                     |  |                         |
| 6 N Isle   | 01   | 1250CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Todd County</b>   |      |                            |                           |                          |                      |   |                     |  |                         |
| 3 S Long Prairie   | 01   | 1250CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Todd County</b>   |      |                            |                           |                          |                      |   |                     |  |                         |
| 9 E Long Prairie   | 01   | 1315CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Kanabec County</b>  |      |                            |                           |                          |                      |   |                     |  |                         |
| Ogilvie  | 01   | 1345CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G65) |
| Roof of high school partially ripped off.  |      |                            |                           |                          |                      |   |                     |  |                         |
| <b>Stearns County</b>  |      |                            |                           |                          |                      |   |                     |  |                         |
| 4 S St Francis   | 01   | 1348CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Morrison County</b>   |      |                            |                           |                          |                      |   |                     |  |                         |
| Little Falls   | 01   | 1359CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.75)             |
| <b>Morrison County</b>   |      |                            |                           |                          |                      |   |                     |  |                         |
| 3 E Upsala   | 01   | 1400CST<br>1405CST         |                           |                          | 0                    | 0 |                     |  | Hail (1.75)             |
| <b>Morrison County</b>   |      |                            |                           |                          |                      |   |                     |  |                         |
| Little Falls   | 01   | 1401CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.50)             |
| <b>Kanabec County</b>  |      |                            |                           |                          |                      |   |                     |  |                         |
| Mora   | 01   | 1405CST<br>1410CST         |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Stearns County</b>  |      |                            |                           |                          |                      |   |                     |  |                         |
| St Francis   | 01   | 1421CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Stearns County</b>  |      |                            |                           |                          |                      |   |                     |  |                         |
| 1 N Holdingford  | 01   | 1445CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Stearns County</b>  |      |                            |                           |                          |                      |   |                     |  |                         |
| Opole  | 01   | 1455CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.88)             |
| <b>Stearns County</b>  |      |                            |                           |                          |                      |   |                     |  |                         |
| 2 NE St Stephen  | 01   | 1505CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.00)             |
| <b>Benton County</b>   |      |                            |                           |                          |                      |   |                     |  |                         |
| 2 NW Gilman  | 01   | 1520CST                    |                           |                          | 0                    | 0 |                     |  | Hail (2.00)             |
| <b>Benton County</b>   |      |                            |                           |                          |                      |   |                     |  |                         |
| Rum River  | 01   | 1530CST<br>1540CST         |                           |                          | 0                    | 0 |                     |  | Hail (1.75)             |
| <b>Morrison County</b>   |      |                            |                           |                          |                      |   |                     |  |                         |
| 6 E Morrill  | 01   | 1530CST<br>1540CST         |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |

# Storm Data and Unusual Weather Phenomena

September 2002

|  |      |                            |                           |                          |                      |         |                     |       | September 2002          |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|-------------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm      |
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                         |
| <b><u>MINNESOTA, Central and South Central</u></b> |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Mcleod County</b>                               |      |                            |                           |                          |                      |         |                     |       |                         |
| 8 SE Brownton                                      | 01   | 1540CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Benton County</b>                               |      |                            |                           |                          |                      |         |                     |       |                         |
| 6 ESE Sauk Rapids                                  | 01   | 1542CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Mille Lacs County</b>                           |      |                            |                           |                          |                      |         |                     |       |                         |
| 7 NW Milaca  | 01   | 1545CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Sibley County</b>                               |      |                            |                           |                          |                      |         |                     |       |                         |
| 3 SE New Auburn                                    | 01   | 1545CST<br>1555CST         |                           |                          | 0                    | 0       |                     |       | Hail (1.75)             |
| <b>Sibley County</b>                               |      |                            |                           |                          |                      |         |                     |       |                         |
| 4 NW Henderson                                     | 01   | 1620CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Carver County</b>                               |      |                            |                           |                          |                      |         |                     |       |                         |
| 6 SW East Union                                    | 01   | 1640CST<br>1655CST         |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Benton County</b>                               |      |                            |                           |                          |                      |         |                     |       |                         |
| 6 SW Foley   | 01   | 1654CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Scott County</b>                                |      |                            |                           |                          |                      |         |                     |       |                         |
| 4 S Jordan   | 01   | 1658CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Sherburne County</b>                            |      |                            |                           |                          |                      |         |                     |       |                         |
| 2 E Zimmerman                                      | 01   | 1715CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Carver County</b>                               |      |                            |                           |                          |                      |         |                     |       |                         |
| 1 SE Watertown                                     | 01   | 1850CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Anoka County</b>                                |      |                            |                           |                          |                      |         |                     |       |                         |
| Anoka  | 01   | 2010CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Anoka County</b>                                |      |                            |                           |                          |                      |         |                     |       |                         |
| Ramsey   | 01   | 2018CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Sherburne County</b>                            |      |                            |                           |                          |                      |         |                     |       |                         |
| Elk River  | 01   | 2031CST<br>2036CST         |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Todd County</b>                                 |      |                            |                           |                          |                      |         |                     |       |                         |
| Hewitt   | 02   | 0729CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Todd County</b>                                 |      |                            |                           |                          |                      |         |                     |       |                         |
| 1 W Staples  | 02   | 0755CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Ramsey County</b>                               |      |                            |                           |                          |                      |         |                     |       |                         |
| White Bear Lake                                    | 05   | 1540CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G50) |
| Numerous large branches down.                      |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Washington County</b>                           |      |                            |                           |                          |                      |         |                     |       |                         |
| Oakdale  | 05   | 1545CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G55) |
| Few trees down.                                    |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Washington County</b>                           |      |                            |                           |                          |                      |         |                     |       |                         |
| Afton  | 05   | 1555CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G55) |
| Few trees down.                                    |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Meeker County</b>                               |      |                            |                           |                          |                      |         |                     |       |                         |
| 1 N Dassel   | 05   | 2010CST<br>2040CST         |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| Hailed on and off for 30 minutes.                  |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Meeker County</b>                               |      |                            |                           |                          |                      |         |                     |       |                         |
| Dassel   | 05   | 2010CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Meeker County</b>                               |      |                            |                           |                          |                      |         |                     |       |                         |
| 2 E Dassel   | 05   | 2018CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Meeker County</b>                               |      |                            |                           |                          |                      |         |                     |       |                         |
| 4 W Dassel   | 05   | 2018CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.75)             |
| <b>Meeker County</b>                               |      |                            |                           |                          |                      |         |                     |       |                         |
| Dassel   | 05   | 2032CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.25)             |
| <b>Todd County</b>                                 |      |                            |                           |                          |                      |         |                     |       |                         |
| 8 SW Long Prairie                                  | 05   | 2100CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## MINNESOTA, Central and South Central

|                                       |    |                       |  |  |   |   |      |  |              |
|---------------------------------------|----|-----------------------|--|--|---|---|------|--|--------------|
| <b>Wright County</b><br>4 S Cokato    | 05 | 2111CST               |  |  | 0 | 0 |      |  | Funnel Cloud |
|                                       |    | Distance approximate. |  |  |   |   |      |  |              |
| <b>Wright County</b><br>South Haven   | 05 | 2203CST               |  |  | 0 | 0 |      |  | Hail (1.75)  |
| <b>Stearns County</b><br>St Cloud     | 05 | 2214CST               |  |  | 0 | 0 |      |  | Hail (0.88)  |
| <b>Stearns County</b><br>St Cloud     | 05 | 2220CST               |  |  | 0 | 0 |      |  | Hail (1.50)  |
| <b>Wright County</b><br>1 N Annandale | 05 | 2224CST               |  |  | 0 | 0 |      |  | Hail (0.88)  |
| <b>Sherburne County</b><br>Elk River  | 05 | 2240CST               |  |  | 0 | 0 |      |  | Hail (1.00)  |
| <b>Wright County</b><br>Countywide    | 06 | 0300CST<br>0600CST    |  |  | 0 | 0 | 2.2M |  | Flash Flood  |

Three to seven inches of rain fell on waterlogged Wright County, site of several flash floods earlier in the summer. Several creeks and ditches overflowed, including Willow Creek in Buffalo. Water was two to three feet deep over numerous roads. Basements were flooded in homes and businesses. The parking lot of a vehicle dealership flooded, and 80 vehicles sustained damage. Several other vehicles were flooded at a nearby auto repair shop.

|                                     |    |                    |     |    |   |   |      |  |              |
|-------------------------------------|----|--------------------|-----|----|---|---|------|--|--------------|
| <b>Wright County</b><br>Albertville | 09 | 2311CST<br>2314CST | 1.1 | 75 | 0 | 0 | 1.4M |  | Tornado (F1) |
|-------------------------------------|----|--------------------|-----|----|---|---|------|--|--------------|

A rare late night tornado struck a subdivision in Albertville. According to a damage survey conducted by NWS personnel, it touched down on the eastern edge of Cedar Creek Golf Course, trekked straight east, and dissipated in a city park just west of the railroad tracks. It completely tore the roof off of one home. Roofs were partially off a number of other homes, many attached garages collapsed, and a couple of houses were rotated on their foundation. About 20 homes were damaged, nine of which sustained significant damage.

## MINNESOTA, Northeast

|  |          |                                |  |  |   |   |  |  |             |
|--|----------|--------------------------------|--|--|---|---|--|--|-------------|
| <b>Pine County</b><br>Sandstone                        | 01<br>02 | 1330CST<br>1330CST             |  |  | 0 | 0 |  |  | Hail (0.88) |
|  |          | The hail lasted 30 minutes.    |  |  |   |   |  |  |             |
| <b>Pine County</b><br>Hinckley                         | 01<br>02 | 1420CST<br>1420CST             |  |  | 0 | 0 |  |  | Hail (0.75) |
| <b>Cass County</b><br>Leader                           | 02       | 0817CST                        |  |  | 0 | 0 |  |  | Hail (2.50) |
| <b>Carlton County</b><br>Cloquet                       | 02       | 1225CST                        |  |  | 0 | 0 |  |  | Hail (0.88) |
| <b>Carlton County</b><br>Esko                          | 02       | 1235CST                        |  |  | 0 | 0 |  |  | Hail (1.25) |
| <b>St. Louis County</b><br>Nopeming to<br>8 S Nopeming | 02       | 1245CST                        |  |  | 0 | 0 |  |  | Hail (0.88) |
| <b>St. Louis County</b><br>Duluth                      | 02       | 1250CST                        |  |  | 0 | 0 |  |  | Hail (2.00) |
|  |          | Hail fell at 83rd West Street. |  |  |   |   |  |  |             |
| <b>St. Louis County</b><br>Duluth                      | 02       | 1305CST                        |  |  | 0 | 0 |  |  | Hail (2.75) |
|  |          | Hail fell at Park Point.       |  |  |   |   |  |  |             |

## MINNESOTA, Northwest

|                                |    |   |  |  |   |   |     |  |                   |
|--------------------------------|----|---|--|--|---|---|-----|--|-------------------|
| <b>Roseau County</b><br>Roseau | 01 | 0015CST   |  |  | 0 | 0 | 15K |  | Thunderstorm Wind |
|                                |    | Trees and powerlines were blown down, boats and trailers were flipped over, and fences were pushed over by the strong wind. |  |  |   |   |     |  |                   |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |      |                            |                           |                          |                      |   |                     |  |                                      |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|--|--------------------------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |  | Character of Storm                   |
| MINNESOTA, Northwest   |      |                            |                           |                          |                      |   |                     |  |                                      |
| Lake Of The Woods County   |      |                            |                           |                          |                      |   |                     |  |                                      |
| 15 SW Williams   | 01   | 0035CST<br>0045CST         |                           |                          | 0                    | 0 | 5K                  |  | Thunderstorm Wind                    |
| Many large trees were snapped off or uprooted near Norris Camp.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Beltrami County  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 16 N Fourtown  | 01   | 0040CST<br>0050CST         |                           |                          | 0                    | 0 | 5K                  |  | Thunderstorm Wind                    |
| Numerous large trees were snapped off or uprooted in the Beltrami Island State Forest.   |      |                            |                           |                          |                      |   |                     |  |                                      |
| Lake Of The Woods County   |      |                            |                           |                          |                      |   |                     |  |                                      |
| Baudette   | 01   | 0055CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G51) <sup>M</sup> |
| The Baudette ASOS reported a 59 mph wind gust. Many trees were blown down. A storage center sustained major damage when all its sheet metal was torn off and blown across the nearby highway. The flying debris snapped power poles along the highway. |      |                            |                           |                          |                      |   |                     |  |                                      |
| Otter Tail County  |      |                            |                           |                          |                      |   |                     |  |                                      |
| New York Mills Arpt  | 01   | 0210CST                    |                           |                          | 0                    | 0 | 20K                 |  | Thunderstorm Wind                    |
| Strong winds destroyed a hangar, damaged an airplane and boat inside, and knocked out power to the airport. The airport beacon and beacon tower were also knocked over.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Clay County  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Sabin  | 02   | 0505CST                    |                           |                          | 0                    | 0 | 0.50K               |  | Thunderstorm Wind                    |
| Tree branches were downed by the wind.   |      |                            |                           |                          |                      |   |                     |  |                                      |
| Otter Tail County  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 5 N Wrightstown  | 02   | 0730CST                    |                           |                          | 0                    | 0 |                     |  | Hail (2.00)                          |
| Wadena County  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 1 SSW Verndale   | 02   | 0740CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.75)                          |
| Wadena County  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 1 E Aldrich  | 02   | 0745CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.75)                          |
| Wilkin County  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 3 N Wolverton  | 18   | 1700CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.50)                          |
| Clay County  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Comstock   | 18   | 1710CST                    |                           |                          | 0                    | 0 |                     |  | Hail (2.75)                          |
| The large hail caused substantial damage in Comstock. Roofs, windows, and cars were damaged.   |      |                            |                           |                          |                      |   |                     |  |                                      |
| Wilkin County  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 4 N Wolverton  | 18   | 1710CST                    |                           |                          | 0                    | 0 |                     |  | Hail (2.75)                          |
| The large hail damaged the windows and siding on buildings.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Clay County  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 1 E Comstock   | 18   | 1717CST                    |                           |                          | 0                    | 0 |                     |  | Hail (2.75)                          |
| Clay County  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Sabin  | 18   | 1722CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.00)                          |
| Clay County  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 1.5 W Baker  | 18   | 1740CST<br>1805CST         |                           |                          | 0                    | 0 |                     |  | Hail (1.75)                          |
| The hail broke windows and damaged the siding, trim, and gutters on a house.   |      |                            |                           |                          |                      |   |                     |  |                                      |
| Clay County  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 3 E Downer to<br>4 E Downer  | 18   | 1757CST<br>1803CST         | 1                         | 25                       | 0                    | 0 | 1K                  |  | Tornado (F1)                         |
| A 14x14 foot one thousand pound shed door was torn off a barn and thrown 150 feet on top of a 24 foot high grain bin. Calf pens were also flipped over.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Clay County  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 1 N Downer   | 18   | 1808CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)                          |
| Becker County  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 8.5 NW Lake Park   | 18   | 1900CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)                          |
| Kittson County   |      |                            |                           |                          |                      |   |                     |  |                                      |
| Orleans  | 18   | 1900CST<br>2200CST         |                           |                          | 0                    | 0 |                     |  | Flash Flood                          |
| Water was over county road 6.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Mahnomen County  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 16 E Waubun  | 18   | 2030CST<br>2045CST         |                           |                          | 0                    | 0 |                     |  | Hail (0.75)                          |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## MINNESOTA, Southeast

NONE REPORTED.

## MINNESOTA, Southwest

### **Rock County**

3 W Beaver Creek 18 0316CST 0 0 Hail (0.75)

## MINNESOTA, West

NONE REPORTED.

## MINNESOTA, West Central

NONE REPORTED.

## MISSISSIPPI, Central

### **Madison County**

4 E Flora 15 1730CST 0 0 12K Thunderstorm Wind

High winds in a thunderstorm knocked down trees and powerlines, as well as destroying a shed and removing the roof from a carport on Livingston-Vernon Road.

**MSZ036-042>045-047>048-050-052-054>055-057>058-061>062-066-072>074**

**Holmes - Yazoo - Madison - Leake - Neshoba - Warren - Hinds - Scott - Lauderdale - Copiah - Simpson - Jasper - Clarke - Franklin - Lincoln - Jones - Marion - Lamar - Forrest**

26 0200CST 0 0 500K Tropical Storm  
1600CST

Tropical Storm Isidore moved onshore along the Louisiana coast early in the morning of September 26. The weakening storm then moved northeast across eastern Mississippi during the day. The heavy rainfall associated with the storm resulted in significant river and flash flooding across much of Mississippi. Twenty-four hour rainfall totals between 5 and 10 inches were common over much of Mississippi, especially in the southern part of the state, where twenty-four hour amounts exceeded 9 inches near Hattiesburg. Gradient wind gusts between 35 and 45 miles per hour combined with the saturated ground to lead to numerous downed trees and powerlines over the state. Most of the damage was seen along and east of the Natchez Trace, near the path of the storm's diffuse center. One indirect fatality was reported just east of the Kalem community in Scott County. Here, a falling tree struck a truck driven by a 31 year-old male. Damage from Isidore was an estimated \$500,000.

### **Marion County**

Columbia 26 0230CST 0 0 2K Flash Flood  
0500CST

Heavy rainfall resulted in numerous streets flooded across the city.

### **Lamar County**

Countywide 26 0400CST 0 0 10K Flash Flood  
0500CST

Six homes around the county had minor flooding.

### **Forrest County**

Countywide 26 0530CST 0 0 3K Thunderstorm Wind

Severe thunderstorm winds blew down several trees across the county.

### **Forrest County**

Petal 26 0530CST 0 0 1K Flash Flood  
0540CST

Heavy rainfall resulted in three feet of water across a roadway in Petal as well as numerous streets flooded in Hattiesburg. Twenty-four hour rainfall totals were more than 9 inches in Hattiesburg.

### **Jones County**

Countywide 26 0700CST 0 0 1K Flash Flood  
0715CST

Several roads in the county were flooded due to heavy rainfall.

### **Smith County**

Countywide 26 0700CST 0 0 1K Flash Flood  
0715CST

Minor flooding was reported on several roads throughout the county.

### **Hinds County**

Jackson 26 0800CST 0 0 3K Flash Flood  
1100CST

Numerous streets and roads were flooded in the city.

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |      |                            |                           |                          |                      |   |                     |  |                    |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|--|--------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |  | Character of Storm |
|  |      |                            |                           |                          |                      |   |                     |  |                    |
| <b><u>MISSISSIPPI, Central</u></b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Jones County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Laurel   | 26   | 0800CST<br>0815CST         |                           |                          | 0                    | 0 | 2K                  |  | Flash Flood        |
| Several roads in the city were flooded, with some road closures.   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Madison County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Countywide   | 26   | 0800CST<br>1030CST         |                           |                          | 0                    | 0 | 2.5K                |  | Flash Flood        |
| Numerous roads were flooded in the county.   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Rankin County</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Countywide   | 26   | 0800CST<br>1000CST         |                           |                          | 0                    | 0 | 5K                  |  | Flash Flood        |
| Heavy rainfall over the county resulted in the flooding of numerous roads. Street flooding, causing vehicles to stall, was reported on US Highway 80 and on Luckney Road, both near Brandon. Water was also reported over the road on Old Brandon and Old Fannin Roads in Flowood. |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Scott County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Countywide   | 26   | 0800CST<br>1000CST         |                           |                          | 0                    | 0 | 15K                 |  | Flash Flood        |
| Heavy rainfall washed out a few roads and bridges in the county.   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Copiah County</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Countywide   | 26   | 0815CST<br>1300CST         |                           |                          | 0                    | 0 | 12.5K               |  | Flash Flood        |
| Heavy rainfall across the county resulted in the flooding of numerous roads across the county. High water also resulted in minor damage to the Emergency Management office.  |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Franklin County</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Countywide   | 26   | 0830CST<br>1300CST         |                           |                          | 0                    | 0 | 1K                  |  | Flash Flood        |
| Rising water approached many homes across the county.  |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Lincoln County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Countywide   | 26   | 0830CST<br>1300CST         |                           |                          | 0                    | 0 | 2K                  |  | Flash Flood        |
| Numerous roads were flooded across the county, with several road closures also seen.   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Lamar County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| 10 NE Oak Grove  | 26   | 0833CST<br>0900CST         |                           |                          | 0                    | 0 | 5K                  |  | Flash Flood        |
| Six homes were flooded due to heavy rainfall.  |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Newton County</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Countywide   | 26   | 0900CST<br>1000CST         |                           |                          | 0                    | 0 | 10K                 |  | Flash Flood        |
| Heavy rainfall resulted in the flooding of several roads within the county. Flooding also washed out a bridge in the county.   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Warren County</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Vicksburg  | 26   | 0915CST<br>1200CST         |                           |                          | 0                    | 0 | 10K                 |  | Flash Flood        |
| Flash flooding resulted in several road closures in the city. Some roads were also washed out.   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Noxubee County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Shuqualak  | 26   | 0927CST<br>0945CST         |                           |                          | 0                    | 0 | 1K                  |  | Flash Flood        |
| Street flooding in the city threatened several area homes.   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Humphreys County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Countywide   | 26   | 1300CST<br>1600CST         |                           |                          | 0                    | 0 | 2K                  |  | Flash Flood        |
| Heavy rainfall resulted in significant street flooding across the county. Some homes were also threatened by high water.   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Leflore County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Countywide   | 26   | 1300CST<br>1600CST         |                           |                          | 0                    | 0 | 1.5K                |  | Flash Flood        |
| Several roads were closed in the county due to street flooding.  |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Sunflower County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Countywide   | 26   | 1430CST<br>1630CST         |                           |                          | 0                    | 0 | 1.5K                |  | Flash Flood        |
| Considerable street flooding across the county resulted many road closures. The intersection of St. Ann Road and Swamp Road was impassible.  |      |                            |                           |                          |                      |   |                     |  |                    |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## MISSISSIPPI, Central

### **Grenada County**

|            |    |                    |  |  |   |   |      |  |             |
|------------|----|--------------------|--|--|---|---|------|--|-------------|
| Countywide | 26 | 1530CST<br>1645CST |  |  | 0 | 0 | 1.5K |  | Flash Flood |
|------------|----|--------------------|--|--|---|---|------|--|-------------|

Heavy rain resulted in considerable street flooding across the county with several roads closed.

## MISSISSIPPI, North

### **Tippah County**

|            |    |                    |  |  |   |   |    |  |                   |
|------------|----|--------------------|--|--|---|---|----|--|-------------------|
| 1 W Walnut | 06 | 1730CST<br>1735CST |  |  | 0 | 0 | 5K |  | Thunderstorm Wind |
|------------|----|--------------------|--|--|---|---|----|--|-------------------|

Several power lines were knocked down.

### **De Soto County**

|           |    |                    |  |  |   |   |    |  |             |
|-----------|----|--------------------|--|--|---|---|----|--|-------------|
| Horn Lake | 19 | 1800CST<br>1805CST |  |  | 0 | 0 | 1K |  | Flash Flood |
|-----------|----|--------------------|--|--|---|---|----|--|-------------|

A few streets were flooded.

### **De Soto County**

|           |    |                    |  |  |   |   |    |  |             |
|-----------|----|--------------------|--|--|---|---|----|--|-------------|
| Horn Lake | 20 | 1030CST<br>1130CST |  |  | 0 | 0 | 1K |  | Flash Flood |
|-----------|----|--------------------|--|--|---|---|----|--|-------------|

Several streets were flooded.

### **Chickasaw County**

|         |    |                    |  |  |   |   |    |  |             |
|---------|----|--------------------|--|--|---|---|----|--|-------------|
| Houston | 26 | 1227CST<br>1600CST |  |  | 0 | 0 | 1K |  | Flash Flood |
|---------|----|--------------------|--|--|---|---|----|--|-------------|

Several roads were flooded.

### **Calhoun County**

|            |    |                    |  |  |   |   |    |  |             |
|------------|----|--------------------|--|--|---|---|----|--|-------------|
| Countywide | 26 | 1530CST<br>1800CST |  |  | 0 | 0 | 1K |  | Flash Flood |
|------------|----|--------------------|--|--|---|---|----|--|-------------|

Several roads were flooded.

### **Lee County**

|         |    |                    |  |  |   |   |    |  |             |
|---------|----|--------------------|--|--|---|---|----|--|-------------|
| Guntown | 26 | 1530CST<br>1800CST |  |  | 0 | 0 | 5K |  | Flash Flood |
|---------|----|--------------------|--|--|---|---|----|--|-------------|

A couple of trees fell because of the flood water. Some roads were flooded.

### **Pontotoc County**

|            |    |                    |  |  |   |   |    |  |             |
|------------|----|--------------------|--|--|---|---|----|--|-------------|
| Countywide | 26 | 1530CST<br>1800CST |  |  | 0 | 0 | 1K |  | Flash Flood |
|------------|----|--------------------|--|--|---|---|----|--|-------------|

Some roads were flooded.

### **Union County**

|            |    |                    |  |  |   |   |    |  |             |
|------------|----|--------------------|--|--|---|---|----|--|-------------|
| Countywide | 26 | 1530CST<br>1800CST |  |  | 0 | 0 | 1K |  | Flash Flood |
|------------|----|--------------------|--|--|---|---|----|--|-------------|

A few roads were flooded.

### **Alcorn County**

|         |    |                    |  |  |   |   |    |  |             |
|---------|----|--------------------|--|--|---|---|----|--|-------------|
| Corinth | 26 | 1630CST<br>1830CST |  |  | 0 | 0 | 1K |  | Flash Flood |
|---------|----|--------------------|--|--|---|---|----|--|-------------|

A few streets were flooded.

### **MSZ001>002-008-010>012-020**

|   |    |                    |  |  |   |   |     |  |                 |
|---|----|--------------------|--|--|---|---|-----|--|-----------------|
| De Soto - Marshall - Tate - Coahoma - Quitman - Panola - Tallahatchie | 26 | 1630CST<br>1830CST |  |  | 0 | 0 | 50K |  | High Wind (G35) |
|---|----|--------------------|--|--|---|---|-----|--|-----------------|

Some trees and power lines were blown down.

### **Panola County**

|            |    |                    |  |  |   |   |    |  |             |
|------------|----|--------------------|--|--|---|---|----|--|-------------|
| Batesville | 26 | 1630CST<br>1830CST |  |  | 0 | 0 | 1K |  | Flash Flood |
|------------|----|--------------------|--|--|---|---|----|--|-------------|

A few roads were flooded.

### **Quitman County**

|         |    |                    |  |  |   |   |    |  |             |
|---------|----|--------------------|--|--|---|---|----|--|-------------|
| Darling | 26 | 1630CST<br>1830CST |  |  | 0 | 0 | 1K |  | Flash Flood |
|---------|----|--------------------|--|--|---|---|----|--|-------------|

Several roads were closed due to flooding.

### **Tallahatchie County**

|            |    |                    |  |  |   |   |    |  |             |
|------------|----|--------------------|--|--|---|---|----|--|-------------|
| Countywide | 26 | 1630CST<br>1830CST |  |  | 0 | 0 | 1K |  | Flash Flood |
|------------|----|--------------------|--|--|---|---|----|--|-------------|

A couple of roads were flooded.



# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## MISSISSIPPI, South

roads and some homes and businesses flooded.

Most areas recorded sustained winds of 25 to 35 mph with some gusts to 40 to 50 mph in squalls. The highest recorded winds on land areas were at Gulfport Airport with a maximum sustained wind of 37 mph and a gust of 50 mph.

Approximately 800 people sought refuge in shelters across coastal Mississippi.

Damage estimate was based on information from the Mississippi Emergency Management Agency on approved state and federal assistance as of late November 2002, and on general information concerning damages related to Tropical Storm Isidore released by the Insurance Services Office in late October 2002.

## MISSISSIPPI, Southeast

### Stone County

|                          |    |                    |  |  |   |   |  |  |             |
|--------------------------|----|--------------------|--|--|---|---|--|--|-------------|
| Wiggins to<br>Perkinston | 26 | 0135CST<br>0300CST |  |  | 0 | 0 |  |  | Flash Flood |
|--------------------------|----|--------------------|--|--|---|---|--|--|-------------|

Heavy rains from Tropical Storm Isidore caused high water along parts of U. S. Highway 49 south of Wiggins. The inside lane of the highway had to be closed for more than an hour due to the standing water.

## MISSOURI, East

### St. Louis (C)

|          |    |         |  |  |   |   |    |  |           |
|----------|----|---------|--|--|---|---|----|--|-----------|
| St Louis | 19 | 1530CST |  |  | 0 | 0 | 5K |  | Lightning |
|----------|----|---------|--|--|---|---|----|--|-----------|

### St. Louis (C)

|          |    |         |  |  |   |   |     |  |                         |
|----------|----|---------|--|--|---|---|-----|--|-------------------------|
| St Louis | 19 | 1530CST |  |  | 0 | 0 | 10K |  | Thunderstorm Wind (G52) |
|----------|----|---------|--|--|---|---|-----|--|-------------------------|

St. Louis Police reported a tree fell on a house in south St. Louis. About 3 blocks away, lightning struck a house and started a fire.

## MISSOURI, Lower

### Dunklin County

|          |    |                    |  |  |   |   |    |  |                   |
|----------|----|--------------------|--|--|---|---|----|--|-------------------|
| Clarkton | 19 | 1450CST<br>1455CST |  |  | 0 | 0 | 5K |  | Thunderstorm Wind |
|----------|----|--------------------|--|--|---|---|----|--|-------------------|

A few trees were blown down.

## MISSOURI, Northeast

NONE REPORTED.

## MISSOURI, Northwest

NONE REPORTED.

## MISSOURI, Southeast

MOZ076-086>087-100-107>112-114 Perry - Bollinger - Cape Girardeau - Wayne - Carter - Ripley - Butler - Stoddard - Scott - Mississippi - New Madrid

|  |    |         |  |  |   |   |  |  |         |
|--|----|---------|--|--|---|---|--|--|---------|
|  | 01 | 0000CST |  |  | 0 | 0 |  |  | Drought |
|  | 19 | 1000CST |  |  |   |   |  |  |         |

Moderate drought conditions persisted over southeast Missouri through mid September. A very heavy rainfall event in mid August was the exception to persistent dryness that began in June. Crop losses were mitigated by the August rainfall.

## MISSOURI, Southwest

### Polk County

|                  |    |         |  |  |   |   |   |  |             |
|------------------|----|---------|--|--|---|---|---|--|-------------|
| 3 SW Humansville | 03 | 1615CST |  |  | 0 | 0 | 0 |  | Hail (0.75) |
|------------------|----|---------|--|--|---|---|---|--|-------------|

## MONTANA, Central

### MTZ052

|           |    |         |  |  |   |   |  |  |                 |
|-----------|----|---------|--|--|---|---|--|--|-----------------|
| Jefferson | 01 | 1630MST |  |  | 0 | 0 |  |  | High Wind (G56) |
|-----------|----|---------|--|--|---|---|--|--|-----------------|

A wind gust to 65 mph occurred, blowing over a 50 foot cotton wood tree.

### Judith Basin County

|          |    |         |  |  |   |   |  |  |                         |
|----------|----|---------|--|--|---|---|--|--|-------------------------|
| Moccasin | 03 | 1607MST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G61) |
|----------|----|---------|--|--|---|---|--|--|-------------------------|

A severe thunderstorm produced a 70 mph wind gust at Moccasin 17NE. A few shingles were blown off a roof.

### Fergus County

|          |    |         |  |  |   |   |  |  |             |
|----------|----|---------|--|--|---|---|--|--|-------------|
| Winifred | 04 | 2055MST |  |  | 0 | 0 |  |  | Hail (1.00) |
|----------|----|---------|--|--|---|---|--|--|-------------|

A severe thunderstorm produced 1.00 inch hail at Winifred 3E.

### MTZ009>010

### North Rocky Mountain Front - Eastern Glacier

|  |    |                    |  |  |   |   |  |  |                              |
|--|----|--------------------|--|--|---|---|--|--|------------------------------|
|  | 19 | 0756MST<br>0810MST |  |  | 0 | 0 |  |  | High Wind (G63) <sup>M</sup> |
|--|----|--------------------|--|--|---|---|--|--|------------------------------|

A high wind event occurred over the northern Rocky Mountain Front and in the Cut Bank area as a Canadian cold front pushed through the region. Sustained winds of 44 mph with gusts to 54 mph occurred at Cut Bank at 0756 MST. A 72 mph gust at Babb occurred at 0810 MST. Sustained winds of 45 mph with gusts to 66 mph occurred near Waterton Gate at 1300 MST.

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |      |                            |                           |                          |                      |   |                     |  |                                      |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|--|--------------------------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |  | Character of Storm                   |
| <b><u>MONTANA, Central</u></b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Beaverhead County</b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| Dillon   | 29   | 1727MST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G61) <sup>M</sup> |
| A severe thunderstorm produced a 70 mph wind gust in Dillon.   |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b><u>MONTANA, East</u></b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Petroleum County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 40 NE Winnett  | 03   | 1909MST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50) <sup>M</sup> |
| 58 mph wind reported at Chain Butte RAWS.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Valley County</b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| 24 W Opheim  | 03   | 1945MST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50) <sup>M</sup> |
| 58 mph wind reported at Bluff Creek RAWS.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Valley County</b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| Opheim   | 03   | 2035MST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52) <sup>M</sup> |
| 60 mph wind reported at Opheim.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Phillips County</b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| 25 S Malta   | 04   | 2133MST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52) <sup>M</sup> |
| 60 mph wind reported 25 miles south of Malta.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Valley County</b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| 15 NW Hinsdale   | 05   | 0000MST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52) <sup>M</sup> |
| 60 mph wind reported by spotter 15 miles northwest of Hinsdale.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b><u>MONTANA, South</u></b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Yellowstone County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 20 N Laurel  | 05   | 1815MST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)                          |
| <b>Stillwater County</b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| 10 S Columbus  | 06   | 1500MST                    |                           |                          | 0                    | 0 |                     |  | Wild/Forest Fire                     |
| Cow Creek:<br>Cause: Lightning Strike. Fire grew to 2,000 acres within four hours.<br>Begin Date: September 6, 2002<br>End Date: September 8, 2002<br>Acres Burned: 5495<br>Total Persons: 113<br>Structural Loss: 2<br>Cost: 223,000K |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b><u>MONTANA, West</u></b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| NONE REPORTED.   |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b><u>NEBRASKA, Central</u></b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Keith County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Lemoyne  | 08   | 1545MST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52)              |
| <b>Keith County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 12 NNW Ogallala  | 08   | 1600MST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52)              |
| <b><u>NEBRASKA, East</u></b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Saline County</b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| 2 W Dorchester   | 02   | 1232CST<br>1238CST         |                           |                          | 0                    | 0 |                     |  | Hail (1.00)                          |
| Hail up to 1 inch in diameter was reported near Dorchester.  |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Dodge County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Hooper   | 18   | 1715CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.00)                          |
| <b>Richardson County</b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| Verdon   | 18   | 1907CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50)              |
| Thunderstorm winds downed 6 to 8 inch diameter tree limbs in town.   |      |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Douglas County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| Bennington   | 25   | 1055CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.50)                          |
| <b>Washington County</b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| 3 SE Ft Calhoun  | 25   | 1110CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)                          |
| <b>Lancaster County</b>  |      |                            |                           |                          |                      |   |                     |  |                                      |
| 3 NW Waverly   | 25   | 1155CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)                          |
| <b>Cass County</b>   |      |                            |                           |                          |                      |   |                     |  |                                      |
| 2 E Greenwood  | 25   | 1210CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)                          |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## NEBRASKA, East

### **Saline County**

|            |    |         |  |  |   |   |  |  |             |
|------------|----|---------|--|--|---|---|--|--|-------------|
| 9 N Tobias | 30 | 2321CST |  |  | 0 | 0 |  |  | Hail (1.75) |
|------------|----|---------|--|--|---|---|--|--|-------------|

### **Saline County**

|                                     |    |                    |  |  |   |   |  |  |             |
|-------------------------------------|----|--------------------|--|--|---|---|--|--|-------------|
| 2 E Dorchester to<br>3 E Dorchester | 30 | 2347CST<br>2353CST |  |  | 0 | 0 |  |  | Hail (1.00) |
|-------------------------------------|----|--------------------|--|--|---|---|--|--|-------------|

Hail up to 1 inch in diameter fell east of Dorchester.

### **Saline County**

|           |    |         |  |  |   |   |  |  |             |
|-----------|----|---------|--|--|---|---|--|--|-------------|
| 4 W Crete | 30 | 2358CST |  |  | 0 | 0 |  |  | Hail (0.75) |
|-----------|----|---------|--|--|---|---|--|--|-------------|

## NEBRASKA, Extreme Northeast

NONE REPORTED.

## NEBRASKA, Extreme Southwest

### **Red Willow County**

|              |    |         |  |  |   |   |  |  |             |
|--------------|----|---------|--|--|---|---|--|--|-------------|
| 3 NW Mc Cook | 12 | 1725MST |  |  | 0 | 0 |  |  | Hail (0.75) |
|--------------|----|---------|--|--|---|---|--|--|-------------|

### **Red Willow County**

|             |    |                    |  |  |   |   |  |  |             |
|-------------|----|--------------------|--|--|---|---|--|--|-------------|
| 6 E Mc Cook | 12 | 2000MST<br>2300MST |  |  | 0 | 0 |  |  | Flash Flood |
|-------------|----|--------------------|--|--|---|---|--|--|-------------|

Water running over US highway 6-34.

## NEBRASKA, South Central

NONE REPORTED.

## NEBRASKA, West

NONE REPORTED.

## NEVADA, North

### **NVZ030**

### **Humboldt**

|    |                    |   |   |    |  |                 |
|----|--------------------|---|---|----|--|-----------------|
| 03 | 1500PST<br>1501PST | 0 | 0 | 5K |  | High Wind (G50) |
|----|--------------------|---|---|----|--|-----------------|

A strong gust of wind knocked down a metal light pole at the Flying J Travel Plaza in Winnemucca. The light pole fell onto nearby power lines knocking out power to 1990 customers.

### **Elko County**

|                        |    |                    |   |   |  |             |
|------------------------|----|--------------------|---|---|--|-------------|
| 8 NW (Eko)Harris Fld I | 06 | 1600PST<br>1630PST | 0 | 0 |  | Flash Flood |
|------------------------|----|--------------------|---|---|--|-------------|

Heavy rains along Mountain City Highway 8 miles north of Elko pushed a 20 foot wide mudslide across the highway.

### **Elko County**

|         |    |                    |   |   |  |             |
|---------|----|--------------------|---|---|--|-------------|
| Contact | 06 | 1600PST<br>1630PST | 0 | 0 |  | Flash Flood |
|---------|----|--------------------|---|---|--|-------------|

Heavy rains pushed boulders across Highway 93 near contact.

### **Elko County**

|          |    |                    |   |   |  |                         |
|----------|----|--------------------|---|---|--|-------------------------|
| Montello | 06 | 1630PST<br>1700PST | 0 | 0 |  | Thunderstorm Wind (G61) |
|----------|----|--------------------|---|---|--|-------------------------|

Thunderstorm winds up to 70 mph ripped through Montello.

### **White Pine County**

|      |    |                    |   |   |  |             |
|------|----|--------------------|---|---|--|-------------|
| Ruth | 06 | 1700PST<br>1730PST | 0 | 0 |  | Flash Flood |
|------|----|--------------------|---|---|--|-------------|

Heavy rains pushed mud and debris across road in Ruth.

### **NVZ030**

### **Humboldt**

|    |                    |   |   |  |                              |
|----|--------------------|---|---|--|------------------------------|
| 15 | 1850PST<br>1852PST | 0 | 0 |  | High Wind (G56) <sup>M</sup> |
|----|--------------------|---|---|--|------------------------------|

A wind gust of 64 mph associated with an approaching cold front was reported by a weather spotter near the junction of Highway 95 and 290 about 30 miles north of Winnemucca.

### **Elko County**

|          |    |                    |   |   |  |                                      |
|----------|----|--------------------|---|---|--|--------------------------------------|
| Ruby Vly | 16 | 0400PST<br>0401PST | 0 | 0 |  | Thunderstorm Wind (G57) <sup>M</sup> |
|----------|----|--------------------|---|---|--|--------------------------------------|

Thunderstorm winds produced a wind gust to 66 mph at the Ruby Lake Raws station.

## NEVADA, South

NONE REPORTED.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## NEVADA, West

NONE REPORTED.

## NEW HAMPSHIRE, North and Central

**NHZ001>010-013>014 Northern Coos - Southern Coos - Northern Grafton - Northern Carroll - Southern Grafton - Southern Carroll - Sullivan - Merrimack - Belknap - Strafford - Interior Rockingham - Coastal Rockingham**

**11 1400EST 0 2 Strong Winds**  
**12 0100EST**

Strong and gusty, northwest winds developed behind a cold front that moved through the area. A woman in Hampton Falls was injured when the wind blew down a 6 inch diameter pine tree. In Londonderry, a man was injured when the wind blew down a tree onto his car. Winds also blew down trees and limbs onto power lines in many locations, causing scattered power outages. About 19,000 customers experienced power outages. Peak wind gusts were measured at 47 mph in Concord, 43 mph in Lebanon, and 41 mph in Laconia.

## NEW HAMPSHIRE, Southern

### Cheshire County

**Keene to 15 1700EST 0 0 Heavy Rain**  
**Swanzy 16 0800EST**

Bands of showers and isolated thunderstorms brought heavy rain to parts of southern New Hampshire. The heavy rain was attributed to the remnants of Tropical Storm Hanna interacting with an eastward moving cold front. Rainfall totals of 2 to 2.50 inches were common throughout Cheshire County.

Some specific totals include 2.10 inches in Swanzy and 2.09 inches in Keene. No flooding was reported, aside from minor flooding due to poor drainage.

## NEW JERSEY, Northeast

**NJZ002>006-011 Western Passaic - Bergen - Eastern Passaic - Essex - Hudson - Union**

**01 0000EST 0 0 Drought**  
**30 2359EST**

The wetter trend continued during September with above normal rainfall. Near normal to above normal precipitation occurred in 6 of the past 7 months (March through September). This wetter trend followed a stretch of 8 consecutive months of below normal precipitation (July 2001 through February 2002).

The Brookhaven Hydrologic Service Area (HSA) received an average of 4.72 inches of rain during September, which was 119 percent of normal or 0.73 inches above normal. Significant rainfall was attributed to a slow moving coastal storm during September 2nd and the remnants of tropical systems Hanna and Isidore, during September 15th and 26th. Because some rainfall was produced by convection, amounts were "variable" across the region.

The combined storage in the 13 major reservoirs serving Northeast New Jersey on September 30th was 63.4 percent capacity, which was 10 to 15 percent below normal. Capacities in the individual reservoirs on September 30th were:

|                            |                          |
|----------------------------|--------------------------|
| Newark Reservoirs          | 55.0% (Percent capacity) |
| Jersey City Reservoirs     | 62.5%                    |
| North Jersey District      | 67.6%                    |
| United Water of New Jersey | 61.8%                    |

The State of New Jersey extended the state-wide Drought Emergency that it issued on March 4th, through September 30th. Passaic, Bergen, Essex, Hudson, and Union Counties were included in this emergency.

**NJZ002>006-011 Western Passaic - Bergen - Eastern Passaic - Essex - Hudson - Union**

**11 0900EST 1 12 Wind**  
**1500EST**

A strong pressure gradient developed between Hurricane Gustav, which intensified as it moved offshore, and a high pressure system, which built southeast. High winds quickly developed behind a strong cold front that trailed from a low pressure system over Northeast New England around 10:00 am EDT.

Wind speeds were sustained from 25 to 35 mph with peak gusts from 45 and 55 mph. The highest wind gust measured by the Automated Surface Observing System at Newark/Liberty Airport was 53 mph at 1:30 pm EDT. These winds, which lasted at least 6 hours, resulted in 1 death, 12 injuries, and significant power outages caused by down trees.

At Westfield High School in Union County, New Jersey, high winds "snapped" an enormous "rotted" limb from an Oak Tree, which killed 1 student and injured 12 other students. Two students that were critically injured were air lifted while the other 10 students were treated at local emergency rooms. This limb was as big as a small tree. The students were eating lunch at picnic tables outdoors around 1 pm EDT. F?SC

# Storm Data and Unusual Weather Phenomena

September 2002

| Location                     | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|------------------------------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|                              |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b>NEW JERSEY, Northeast</b> |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Bergen County</b>         |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide                   | 26   | 0900EST                    |                           |                          | 0                    | 0       |                     |       | Heavy Rain         |
|                              | 28   | 0900EST                    |                           |                          |                      |         |                     |       |                    |
| <b>Essex County</b>          |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide                   | 26   | 0900EST                    |                           |                          | 0                    | 0       |                     |       | Heavy Rain         |
|                              | 28   | 0900EST                    |                           |                          |                      |         |                     |       |                    |
| <b>Hudson County</b>         |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide                   | 26   | 0900EST                    |                           |                          | 0                    | 0       |                     |       | Heavy Rain         |
|                              | 28   | 0900EST                    |                           |                          |                      |         |                     |       |                    |
| <b>Passaic County</b>        |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide                   | 26   | 0900EST                    |                           |                          | 0                    | 0       |                     |       | Heavy Rain         |
|                              | 28   | 0900EST                    |                           |                          |                      |         |                     |       |                    |
| <b>Union County</b>          |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide                   | 26   | 0900EST                    |                           |                          | 0                    | 0       |                     |       | Heavy Rain         |
|                              | 28   | 0900EST                    |                           |                          |                      |         |                     |       |                    |

The remnants of Hurricane Isidore passed just to the west and northwest of the New York Metropolitan area. The result was a widespread significant rainfall event that began on Thursday morning September 26th and tapered off early Saturday morning September 28th. During this two day period, northeast New Jersey received between two and two and a half inches of rain. The rain was also accompanied by strong and persistent winds between 20 and 30 MPH sustained along with gusts around 40 MPH that resulted in numerous downed tree branches and even knocked down a few larger tree limbs.

## **NEW JERSEY, South and Northwest**

|                                     |  |  |  |  |   |   |   |  |         |
|-------------------------------------|--|--|--|--|---|---|---|--|---------|
| <b>NJZ001-007&gt;010-012&gt;027</b> | <b>Sussex - Warren - Morris - Hunterdon - Somerset - Middlesex - Western Monmouth - Eastern Monmouth - Mercer - Salem - Gloucester - Camden - Northwestern Burlington - Western Ocean - Cumberland - Western Atlantic - Western Cape May - Eastern Cape May - Eastern Atlantic - Eastern Ocean - Southeastern Burlington</b> |  |  |  |   |   |   |  |         |
| 01                                  | 0000EST  |  |  |  | 0 | 0 | 0 |  | Drought |
| 30                                  | 2359EST  |  |  |  |   |   |   |  |         |

September began with drought conditions intensifying across New Jersey. The month though saw a return of near normal precipitation. This was too late for farmers. On the 3rd, Governor James McGreevey requested to Congress a federal farm disaster declaration. It was estimated that the drought will cost farmers about \$125 million in revenue. The corn harvest was expected to be down 25 percent and the soybean harvest down 30 percent. Revenue drops in some areas were over 50 percent. Hardest hit were farms in Salem, Gloucester and Cumberland Counties where losses approached 60 percent. Field crops such as hay, wheat, sorghum, soybeans and corn for animal feed were hardest hit because they are not irrigated. Only crops that were harvested through mid-July were in good shape. Labor, fertilizer, irrigation and packaging costs were rising. Even farmers that could irrigate were seeing ponds drying. Pumpkins were expected to be smaller in size. Farmers were seeing increased damage from wildlife as deer, small animals and insects moved into fields looking for food and water. Landscaping businesses were also hard hit by the drought. With watering restrictions in place, consumers shied away from new purchases. The grass became dormant. It was estimated that revenue for the landscaping business was off by one-third (about 100 million dollars).

The Delaware River Basin Commission, which oversees water supply throughout the Delaware River Basin declared a "drought" on December 3, 2001 when the supply of water in the New York City reservoir system dropped below a designated level for early December. The commission declared a drought emergency on December 18, 2001. Both triggered additional reductions in the amount of water released from the reservoirs into the Delaware River and the amount diverted out of the Delaware River Basin to New York City and New Jersey. Diversions to New York City dropped from 800 million gallons a day to 520 million gallons a day. The emergency declaration gave the commission the power to restrict the amount of water suppliers could draw from the basin. It gave the commission the authority to take water from municipal reservoirs to maintain river levels. It could also call for water releases from federal, state and privately owned reservoirs. Water from Lake Nockamixon, the F.E. Walter Reservoir and Lake Wallenpaupack could be used to maintain river levels. They were last used for this purpose in the 1960s. The releases help protect the riverbank and aquatic life and also prevents salt water from flowing up the Delaware River. Salt water intrusion causes corrosion problems for industries and increases water treatment costs for municipalities that depend on the river for their water supply. Maintaining river levels are also important for groundwater reserves that are recharged by the river itself. As of September 30th, the salt front along the Delaware River was ten miles farther upstream than its normal September position. The emergency declaration also gives the commission the power to request that utilities and other companies that use more than one million gallons of water a day to prepare contingency plans to use less water and submit the plans to the commission. The New York City Reservoirs which feed the Delaware River decreased from 59.7 percent of capacity on September 1st to 50.4 percent of capacity on October 1st. The northern New Jersey reservoirs were at about 63 percent of capacity as of September 30th, about 8 percent below normal. For the month streamflow on the Delaware River was about 75 percent of normal.

The drought had other affects across the state. A statewide ban of watering lawns and washing vehicles at residences was imposed. Limited outdoor watering of trees, shrubs and vegetable gardens was permitted on an odd-even basis. Open burning remained banned except for barbecues and permits for religious ceremonies. On September 20th, Governor McGreevey issued an

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## NEW JERSEY, South and Northwest

administrative order creating a moratorium on new housing development in Egg Harbor, Galloway and Hamilton Townships. New water service was prohibited in any housing that was not started for the duration of the drought emergency. Atlantic County led the state in well replacements. There was concern about adequate water in streams, rivers, reservoirs and lakes for the autumn trout stocking. Black bears were having more interactions with humans in the northwest part of the state and were heading south toward the Pine Barrens in search of food and water. Oak worm caterpillars were defoliating trees in the southeast part of the state. It was feared they might be pushed over the edge since many were also defoliated by gypsy moth caterpillars in the spring. Recent droughts forced Brick Township (Ocean County) to begin construction on a new billion gallon reservoir. Water will be pumped from the Metedeconk River. On the positive side, the drought (and less inland runoff) led to better water quality in the oceans and bays. This summer had the lowest number of bay swimming bans since 1990. In Ocean County, there were no swimming bans at all.

The return of normal rainfall in September held hope for late field crops. Nevertheless, groundwater monitoring wells in the southern part of the state remained near record lows. The preliminary statewide average precipitation total for the month of September was 4.08 inches. Normal is 4.15 inches. On a county weighted average, September monthly precipitation totals ranged from 3.0 inches in Cape May County to 4.8 inches in Hunterdon, Mercer, Middlesex and Bergen Counties. The greatest precipitation fell across central and northeast New Jersey. Monthly precipitation totals were 3.30 inches at the Atlantic City International Airport and 2.40 inches in Trenton.

NJZ001-007>010-012-014>027

**Sussex - Warren - Morris - Hunterdon - Somerset - Middlesex - Eastern Monmouth - Mercer - Salem - Gloucester - Camden - Northwestern Burlington - Western Ocean - Cumberland - Western Atlantic - Western Cape May - Eastern Cape May - Eastern Atlantic - Eastern Ocean - Southeastern Burlington**

|    |         |   |   |      |
|----|---------|---|---|------|
| 11 | 0900EST | 2 | 2 | Wind |
|    | 1800EST |   |   |      |

F75UT, M62BU

NJZ013

**Western Monmouth**

|    |         |   |   |                              |
|----|---------|---|---|------------------------------|
| 11 | 0900EST | 0 | 0 | High Wind (G52) <sup>M</sup> |
|    | 1800EST |   |   |                              |

The pressure difference between a strong high pressure system in the central part of the country and Tropical Storm Gustav located well east of the Delmarva Peninsula produced strong gusty northwest winds throughout the day on the 11th. Winds frequently gusted between 35 and 45 mph throughout the day and caused considerably more tree damage than usually occurs with winds of that speed. Higher wind gusts occurred along the immediate New Jersey coast. Trees, tree limbs, power lines and portable basketball hoops were knocked down. Wind blown objects killed two people and injured two others. Downed trees also damaged several vehicles and homes. The worst reported damage in the state was from Burlington and Ocean Counties northward. About 14,000 homes and businesses in those parts of the state lost power.

Two people were killed by the wind. A 62-year-old masonry man was crushed by a wind toppled wall at a Lowe's Home Improvement Warehouse under construction in West Windsor Township (Mercer County) at 1120 a.m. EDT. He was crushed by tons of concrete as he was standing on scaffolding at the north end of the work site working on the lower wall. The upper section of the wall blew over. The 13 foot by 30 foot long cinder block wall was built in mid-August. A 75-year-old woman was struck and killed by a large limb (eight inches in diameter) while waiting for her husband to pick her up in an antiques flea market parking lot in West Amwell Township. Another 79-year-old woman suffered bruises and scratches from the same branch. The same tree was rammed by two large trucks in 1999. The limb fell from about 100 feet. A 53-year-old man in Pequannock (Morris County) was slightly injured when a tree landed on his vehicle.

In Sussex County downed trees and power lines were reported in six townships. In Warren County, downed trees and wires were reported in Phillipsburg. The arcing wires caused some small fires. In Morris County, wind damage was reported in about a dozen municipalities. In Boonton Township, three homes suffered gutter and siding damage. One vehicle was also damaged by fallen trees. In Butler Borough, one road was closed into the 12th because of downed trees. Mendham Township dismissed their school children early to give bus drivers more time to negotiate around downed trees. In Madison Township, a fallen wire started brush fires and delayed a transit train. In Hanover Township, five vehicles were damaged by fallen trees. Parsippany Township emergency personnel responded to about 15 weather related problems. In Somerset County, sections of U.S. Routes 202 and 206 were closed because of downed trees and wires. A dump truck driver narrowly escaped serious injury when a tree fell on his vehicle in Far Hills Borough. A woman also narrowly escaped injury when another tree fell on her vehicle in Bernards Township. In Bernardsville Borough, several large trees were knocked down and a gutter and a window of one home was damaged. Downtown Basking Ridge (Bernards Township) was blacked out for seven hours. Burlington County emergency personnel responded to twenty-nine weather related calls.

Peak wind gusts included 60 mph in Keansburg (Monmouth County), 56 mph at Barnegat Light (Ocean County), 53 mph in Point Pleasant (Ocean County), 52 mph in Sandy Hook (Monmouth County), 46 mph in Belmar (Monmouth County) and Cape May (Cape May County), 44 mph at the Atlantic City International Airport, 43 mph in Somerville (Somerset County), 41 mph in Trenton (Mercer County) and Sussex (Sussex County), 40 mph in Wrightstown (Burlington County) and 39 mph in Millville (Cumberland County). Most of the peak gusts occurred during the early afternoon. This was the first widespread wind gusts of these speeds since May 14th. It was suspected tree damage occurred because its been four months since similar gusts happened and because the gusty

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## NEW JERSEY, South and Northwest

winds persisted for an extended part of the day.

### **Monmouth County**

#### **Avon By The Sea**

29 0000EST 1 0 0 0 Rip Currents  
1700EST

Rip currents helped claim the life of a 37-year-old man in Avon. The man was swimming alone and standing on a sandbar when a wave knocked him over. Rescuers had a hard time fighting the currents to save him. He was pulled unconscious from the surf and died on October 1st from multiple organ failures. A high pressure system built over New England during the evening of the 28th and the morning of the 29th. Northeast flow around this high along the ocean usually enhances both the number and strength of rip currents. M37IW

## NEW MEXICO, Central and North

### **NMZ001>021-026**

**Northwest Plateau - Northwest Mountains Including Jemez - Upper Rio Grande Valley - Sangre De Cristo Mountains - Northeast Highlands - Harding - Far Northeast Plains - Westcentral Mountains - Middle Rio Grande Valley - Sandia/Manzano Mountains - Central High Plains/Estancia Valley County - Conchas Lake/Guadalupe - Quay - Southwest Mountains/Upper Gila Region - Lower Rio Grande Valley - Lincoln County High Plains/Hondo Valley - Capitan/Northern Sacramento Mountains - De Baca - Chaves County Plains - Roosevelt - Curry - Guadalupe Mountains Of Chaves County**

01 0000MST 0 0 Drought  
30 2359MST

Very dry conditions continued across north and central New Mexico during early September with lingering high fire danger conditions in the national forests and state grasslands, plus continuing concern of unusually low water flows on both the Rio Grande and Pecos Rivers. Several periods of long awaited soaking rains, however, developed over the region during mid-month. Widespread rains from the 9th through about the 12th of September provided from one to four inches over the 3 to 4 day period. A few reports of minor mud and rock slides were reported, but overall the heavy soakings were welcomed without serious incidents.

### **Catron County**

#### **Glenwood**

11 1335MST 0 0 Flash Flood  
1450MST

Heavy rain over rural southwest sections of Catron County produced a 11 foot rise in water along the San Francisco River and water over State Road 159 at Glenwood.

### **Socorro County**

#### **2 W Socorro**

12 1330MST 0 0 Hail (1.00)

### **Sandoval County**

#### **Ponderosa**

12 1505MST 0 0 Funnel Cloud

### **Sandoval County**

#### **Ponderosa**

12 1505MST 0 0 30K Hail (1.00)

### **Sandoval County**

#### **Ponderosa**

12 1510MST 0 0 5K Thunderstorm Wind (G65)

### **Sandoval County**

#### **4 SW Bernalillo**

12 1730MST 0 0 Hail (0.75)

### **Sandoval County**

#### **Bernalillo**

12 1755MST 0 0 Hail (0.75)

A strong thundertorm developed over south central Sandoval County south of Cuba and then moved eastward with a swath of hail and gusty winds. Funnel clouds, hail and gusty winds caused damage at the Ponderosa winery. Additional funnel clouds and hail were reported near Bernalillo and over far northern sections of Rio Rancho.

### **Chaves County**

#### **Mesa**

13 1336MST 0.1 20 0 0 Tornado (F0)

A brief tornado was reported over open rangeland in far northern Chaves County.

### **NMZ002**

**Northwest Mountains Including Jemez**

18 1800MST 0 0 Heavy Snow  
19 0700MST

Localized heavy snow of 10-12 inches over about 12 hours stranded hunters in the region of Cruces Basin Wilderness located northwest of Tres Piedras in northern Rio Arriba County.

## NEW MEXICO, South Central and Southwest

### **Sierra County**

#### **Cuchillo**

11 1300MST 0 0 500K Flood  
12 0800MST

Persistent heavy rains from thunderstorms repeatedly moving over the same area resulted in Cuchillo creek spilling out of its banks and damaging most of the roads from Cuchillo northwestward toward Monticello. Residents around Cuchillo were told to evacuate. Floodwaters, initially a flash flood, remained at least until the following morning. Estimates of two inches of rain fell on ground saturated from days of previous heavy rains.

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |      |                            |                           |                          |                      |         |                     |       |                         |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|-------------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm      |
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                         |
| <b><u>NEW MEXICO, South Central and Southwest</u></b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Hidalgo County</b><br>2 N Lordsburg   | 11   | 1400MST<br>1405MST         |                           |                          | 0                    | 0       |                     |       | Hail (0.88)             |
| A severe thunderstorm dropped nickel size hail near Lordsburg, along with two inches of rain within 30 minutes which led to the closure of Highway 454 north of Lordsburg.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Hidalgo County</b><br>North Portion   | 11   | 1430MST<br>1730MST         |                           |                          | 0                    | 0       |                     |       | Flash Flood             |
| <b>Grant County</b><br>10 NW Silver City   | 11   | 1505MST<br>1515MST         |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Grant County</b><br>Silver City   | 11   | 1520MST<br>1550MST         |                           |                          | 0                    | 0       | 1M                  | 100K  | Hail (1.75)             |
| <b>Grant County</b><br>3 E Silver City   | 11   | 1600MST<br>1610MST         |                           |                          | 0                    | 0       | 20K                 |       | Hail (1.75)             |
| Two severe mulitcell thunderstorms moved into the Lower Gila Region of southwest New Mexico, the stronger storm giving the Silver City area a direct hit with quarter to golfball size hail. Hail fell for about about 30 minutes in one spot at the peak of the storm's life cycle. Dozens of roofs were severely damaged, while automobiles were dented and windshields shattered. Street flooding also resulted from 1.75 inches of rain in 30 minutes. The preliminary damage estimate was over \$1 million. |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Grant County</b><br>Separ   | 11   | 1545MST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Grant County</b><br>Separ   | 11   | 1600MST<br>1700MST         |                           |                          | 0                    | 0       |                     |       | Flash Flood             |
| A supercell thunderstorm brought flooding and quarter size hail to the vicinity of Separ, which was only on the fringe of the storm.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Luna County</b><br>7 NE Hermanas to<br>Hermanas   | 11   | 1645MST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G57) |
| <b>Luna County</b><br>10 W Columbus  | 11   | 1700MST<br>1830MST         |                           |                          | 0                    | 0       | 10K                 |       | Flash Flood             |
| A second supercell prowled the Mexican border between Hachita and Columbus, forcing the closure of Highway 9 along this stretch due to flash flooding. Cars were stalled and a Ford F150 pickup was washed off the road. Outflow just northeast of the storm was estimated at 65 to 70 mph. A funnel cloud was observed near Columbus.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Otero County</b><br>Northeast Portion   | 12   | 1645MST<br>1945MST         |                           |                          | 0                    | 0       | 40K                 |       | Flash Flood             |
| Heavy rains resulted in numerous road closures in the southern Sacramento Mountains, as well as Highway 54 between Alamogordo and Tularosa. Highway 82 between Alamogordo and Cloudcroft was impassible due to rock slides.  |      |                            |                           |                          |                      |         |                     |       |                         |
| <b><u>NEW MEXICO, Southeast</u></b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Eddy County</b><br>Whites City  | 13   | 1326MST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.88)             |
| A severe thunderstorm developed rapidly over Whites City and produced nickel size hail.  |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Eddy County</b><br>11 W Lakewood  | 15   | 0550MST<br>0615MST         |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood             |
| Flash flooding resulted in three feet of water over County Road 28.  |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Eddy County</b><br>4 SW Carlsbad  | 15   | 0735MST<br>0750MST         |                           |                          | 0                    | 0       | 5K                  | 0     | Flash Flood             |
| Officials reported flash flooding which resulted in high water up to three feet deep over a low water crossing at Dark Canyon Draw near Hidalgo. One vehicle was stalled in the flood waters. No injuries were reported.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Eddy County</b><br>Central Portion  | 15   | 0745MST<br>0845MST         |                           |                          | 0                    | 0       | 0                   | 0     | Urban/Sml Stream Fld    |
| Numerous reports of high water in arroyos and low water crossings were received through mid morning.   |      |                            |                           |                          |                      |         |                     |       |                         |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## NEW YORK, Central

### **Delaware County**

#### **Harpersfield**

**03 0100EST 0 0 20K Lightning**

Lightning struck and killed three horses, a mare and her two fillies. The horses were in a field on Gunhouse Hill Road. Ten other horses and 13 cattle escaped injury in the same field. 900 customers lost power in Stamford from another lightning strike at about the same time.

### **Oneida County**

#### **Taberg**

**03 1745EST 0 0 10K Lightning**

Lightning struck a house on Main Street in the town of Taberg. The damage was confined to the area of the strike. No fire was started. No one was injured.

### **Oneida County**

#### **Camden to**

#### **Forestport**

**03 1800EST 0 0 15K Thunderstorm Wind (G50)**

Trees and wires downed by thunderstorm winds. The towns of Camden, Lee, Boonville, and Forestport had trees and wires down.

### **Delaware County**

#### **2 NE Trout Creek**

**04 0045EST 0 0 100K Lightning**

Lightning struck a barn on Herrick Hollow Road setting it on fire. The fire completely engulfed the barn. Eight pigs were killed. Four beef cattle were seriously injured.

### **Sullivan County**

#### **Countywide**

**04 0100EST 0 0 50K Lightning**  
**0400EST**

Multiple thunderstorms with frequent lightning caused power outages countywide during the early morning hours. The Sullivan County 911 center in White Lake got struck by lightning around 3 AM EST. The lightning knocked out the global positioning system clock and the address location technology on dispatchers computers. Lightning knocked out the electricity in Jeffersonville, Callicoon Center, Fosterdale, and Liberty.

## NEW YORK, Coastal

### **NYZ067>081**

**Orange - Putnam - Rockland - Northern Westchester - Southern Westchester - New York (Manhattan) - Bronx - Richmond (Staten Is.) - Kings (Brooklyn) - Queens - Nassau - Northwest Suffolk - Northeast Suffolk - Southwest Suffolk - Southeast Suffolk**

**01 0000EST 0 0 Drought**  
**30 2359EST**

The wetter trend continued during September with above normal rainfall. Near normal to above normal precipitation occurred in 6 of the past 7 months (March through September). This wetter trend followed a stretch of 8 consecutive months of below normal precipitation (July 2001 through February 2002).

The Brookhaven Hydrologic Service Area (HSA) received an average of 4.72 inches of rain during September, which was 119 percent of normal or 0.73 inches above normal. Significant rainfall was attributed to a slow moving coastal storm during September 2nd and the remnants of tropical systems Hanna and Isidore, during September 15th and 26th. Because some rainfall was produced by convection, amounts were "variable" across the region. Rainfall amounts across Long Island were 165 percent of normal and across New York City was 150 percent of normal. However, rainfall amounts across Orange and Putnam Counties were only 86 percent of normal.

The combined storage in the New York City reservoir system on September 30th was 60.0 percent capacity, which was 13.4 percent below normal. Capacities in the individual reservoirs on September 30th were:

|                        |                          |
|------------------------|--------------------------|
| Croton System          | 78.1% (Percent capacity) |
| Roundout Reservoir     | 92.3%                    |
| Ashokan Reservoir      | 65.1%                    |
| Schoharie Reservoir    | 14.6%                    |
| Cannonsville Reservoir | 35.6%                    |
| Pepcaton Reservoir     | 57.0%                    |
| Neversink Reservoir    | 53.0%                    |

The New York State Department of Environmental Conservation extended the Drought Warning for Long Island, New York City, Rockland and Westchester Counties through September 30th. The Drought Watch for Orange and Putnam Counties was also extended through September 30th.

### **Nassau County**

#### **Countywide**

**01 0900EST 0 0 Heavy Rain**  
**02 2300EST**

### **Suffolk County**

#### **Countywide**

**01 0900EST 0 0 Heavy Rain**  
**02 2300EST**

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## NEW YORK, Coastal

A storm developed along the mid-Atlantic coast and slowly moved up the coast. This produced widespread heavy rain over the area that began during the morning on Sunday, September 1st and lasted through the day on Monday (Labor Day) September 2nd. Spotter and Official National Weather Service Observations indicate widespread rainfall amounts of between one and a half and three inches in Nassau County and between one and two and a half inches in Suffolk County.

### **Queens County Woodside**

|    |                    |  |  |  |   |   |  |  |             |
|----|--------------------|--|--|--|---|---|--|--|-------------|
| 02 | 0800EST<br>0815EST |  |  |  | 0 | 0 |  |  | Flash Flood |
|----|--------------------|--|--|--|---|---|--|--|-------------|

Spotters reported significant widespread street flooding in Woodside, including a stalled car trapped on a flooded street.

### **Kings County Brooklyn**

|    |                    |  |  |  |   |   |  |  |             |
|----|--------------------|--|--|--|---|---|--|--|-------------|
| 02 | 0810EST<br>0830EST |  |  |  | 0 | 0 |  |  | Flash Flood |
|----|--------------------|--|--|--|---|---|--|--|-------------|

A spotter reported significant street flooding in the Greenpoint section of Brooklyn and on the Brooklyn-Queens Expressway (278). Another spotter reported flooding on a few parts of the Belt Parkway.

### **Westchester County Larchmont**

|    |                    |  |  |  |   |   |  |  |             |
|----|--------------------|--|--|--|---|---|--|--|-------------|
| 02 | 0815EST<br>0830EST |  |  |  | 0 | 0 |  |  | Flash Flood |
|----|--------------------|--|--|--|---|---|--|--|-------------|

Local police reported that Larchmont Park was flooded.

### **Nassau County 3 S Biltmore Shrs**

|    |         |  |  |  |   |   |  |  |              |
|----|---------|--|--|--|---|---|--|--|--------------|
| 02 | 1500EST |  |  |  | 1 | 2 |  |  | Rip Currents |
|----|---------|--|--|--|---|---|--|--|--------------|

A 44 year old male lost his life and two boys, aged 10 and 11, were injured in rough seas on South Oyster Bay. The three apparently dragged their boat ashore on Squaw Island (located just east of the Goose Creek Drawbridge on the Wantagh State Parkway-Jones Beach Causeway) and began to collect clams. But, as high tide came in, the additional wave action created by Northeast winds 20 to 25 knots with gusts near 30 knots, jarred the boat loose with the 10 year old boy aboard. The 44 year old male drowned, and the 11 year old boy was rescued by other boaters after attempting to swim after the drifting boat and 10 year old child. The 10 year old boy was rescued with the assistance of other boaters and the police Marine Bureau. Both boys were taken to a local hospital and treated for Hypothermia.

M44IW

### **NYZ067>075-077>081**

**Orange - Putnam - Rockland - Northern Westchester - Southern Westchester - New York (Manhattan) - Bronx - Richmond (Staten Is.) - Kings (Brooklyn) - Nassau - Northwest Suffolk - Northeast Suffolk - Southwest Suffolk - Southeast Suffolk**

|    |                    |  |  |  |   |   |  |  |      |
|----|--------------------|--|--|--|---|---|--|--|------|
| 11 | 0900EST<br>1630EST |  |  |  | 1 | 7 |  |  | Wind |
|----|--------------------|--|--|--|---|---|--|--|------|

M66IW

### **NYZ076**

#### **Queens**

|    |                    |  |  |  |   |   |  |  |                              |
|----|--------------------|--|--|--|---|---|--|--|------------------------------|
| 11 | 0930EST<br>1530EST |  |  |  | 0 | 0 |  |  | High Wind (G52) <sup>M</sup> |
|----|--------------------|--|--|--|---|---|--|--|------------------------------|

A strong pressure gradient developed between Hurricane Gustav, which intensified as it moved offshore, and a high pressure system, which built southeast. High winds quickly developed behind a strong cold front that trailed from a low pressure system over Northeast New England around 10:00 am EDT.

Wind speeds were sustained from 25 to 35 mph with peak gusts from 45 to 55 mph. The highest wind gust measured by the Automated Surface Observing System at JFK Airport in Queens at 60 miles per hour at 2:27 pm EDT. These winds, which lasted at least 6 hours, resulted in 1 death, 4 injuries, and widespread power outages caused by down trees mainly across Long Island.

A 66 year old man drowned when his small boat capsized in rough seas off City Island in Western Long Island Sound. Three other passengers sustained minor injuries.

In Manhattan, 4 injuries occurred. A construction worker was critically injured when gusting winds blew a piece of plywood off the AOL Time Warner Center "under construction" in Columbus Circle around 1 pm. The plywood struck his head. Two women passers-by suffered minor injuries; a minor leg injury and shock. In midtown Manhattan, debris fell to the ground from a building construction site, which injured a passenger in a taxi.

The Long Island Power Authority (LIPA) reported 93,000 power outages, which began around 11 am and peaked during the afternoon.

### **Bronx County Countywide**

|    |         |  |  |  |   |   |  |  |            |
|----|---------|--|--|--|---|---|--|--|------------|
| 26 | 0900EST |  |  |  | 0 | 0 |  |  | Heavy Rain |
| 28 | 0900EST |  |  |  |   |   |  |  |            |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location                        | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|---------------------------------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|                                 |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b><u>NEW YORK, Coastal</u></b> |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Kings County</b>             |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide                      | 26   | 0900EST                    |                           |                          | 0                    | 0       |                     |       | Heavy Rain         |
|                                 | 28   | 0900EST                    |                           |                          |                      |         |                     |       |                    |
| <b>Nassau County</b>            |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide                      | 26   | 0900EST                    |                           |                          | 0                    | 0       |                     |       | Heavy Rain         |
|                                 | 28   | 0900EST                    |                           |                          |                      |         |                     |       |                    |
| <b>New York County</b>          |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide                      | 26   | 0900EST                    |                           |                          | 0                    | 0       |                     |       | Heavy Rain         |
|                                 | 28   | 0900EST                    |                           |                          |                      |         |                     |       |                    |
| <b>Orange County</b>            |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide                      | 26   | 0900EST                    |                           |                          | 0                    | 0       |                     |       | Heavy Rain         |
| <b>Putnam County</b>            |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide                      | 26   | 0900EST                    |                           |                          | 0                    | 0       |                     |       | Heavy Rain         |
|                                 | 28   | 0900EST                    |                           |                          |                      |         |                     |       |                    |
| <b>Queens County</b>            |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide                      | 26   | 0900EST                    |                           |                          | 0                    | 0       |                     |       | Heavy Rain         |
|                                 | 28   | 0900EST                    |                           |                          |                      |         |                     |       |                    |
| <b>Richmond County</b>          |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide                      | 26   | 0900EST                    |                           |                          | 0                    | 0       |                     |       | Heavy Rain         |
|                                 | 28   | 0900EST                    |                           |                          |                      |         |                     |       |                    |
| <b>Rockland County</b>          |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide                      | 26   | 0900EST                    |                           |                          | 0                    | 0       |                     |       | Heavy Rain         |
|                                 | 28   | 0900EST                    |                           |                          |                      |         |                     |       |                    |
| <b>Suffolk County</b>           |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide                      | 26   | 0900EST                    |                           |                          | 0                    | 0       |                     |       | Heavy Rain         |
|                                 | 28   | 0900EST                    |                           |                          |                      |         |                     |       |                    |
| <b>Westchester County</b>       |      |                            |                           |                          |                      |         |                     |       |                    |
| Countywide                      | 26   | 0900EST                    |                           |                          | 0                    | 0       |                     |       | Heavy Rain         |
|                                 | 28   | 0900EST                    |                           |                          |                      |         |                     |       |                    |

The remnants of Hurricane Isidore passed just to the west and northwest of the New York Metropolitan area. The result was a widespread significant rainfall event that began on Thursday morning September 26th and tapered off early Saturday morning September 28th. During this two day period, Westchester County and the Lower Hudson Valley received between one and a half and two inches of rain. During the same time period, New York City and Long Island received between two and two and a half inches of rain. The rain was also accompanied by strong and persistent winds between 20 and 30 MPH sustained along with gusts around 40 MPH that resulted in numerous downed tree branches and even knocked down a few larger tree limbs.

## **NEW YORK, East**

|   |   |         |  |  |   |   |      |  |                              |
|---|---|---------|--|--|---|---|------|--|------------------------------|
| <b>NYZ042-054-059&gt;060-063&gt;064-066</b> | <b>Warren - Eastern Rensselaer - Eastern Greene - Western Columbia - Western Ulster - Eastern Ulster - Eastern Dutchess</b> |         |  |  |   |   |      |  |                              |
|   | 11  | 1500EST |  |  | 0 | 0 | 118K |  | High Wind (G67) <sup>M</sup> |
|   |   | 1830EST |  |  |   |   |      |  |                              |

During the afternoon of September 11, a steep gradient developed between a cool Canadian high pressure area over the Great Lakes, and a double barreled low pressure area, including the circulation from Hurricane Gustaf, off the mid Atlantic Coast. This scenario resulted in a high wind event across portions of eastern New York. Strong northwesterly wind gusts were clocked as high as 67 mph by a weather spotter in the town of Catskill, Greene County. There were reports of some downed trees throughout eastern portions of that county. Trees were also reported blown down near Kingston, and other places in Ulster County. A large limb of a tree fell onto a large home in Hudson, Columbia County, producing minor damage to that structure. More trees were damaged throughout Columbia County. The town of Pine Plains in eastern Dutchess County was hard hit with several large trees and powerlines down. A large concentration of wind damage took place in southeastern Rensselaer County where Route 20, near Nassau, was closed by many trees toppling onto power lines. A nearby local road was temporarily closed as well. Scattered downed trees and power lines were reported throughout Warren County. The wind temporarily knocked out power to about 1,500 customers in the Queensbury - Lake George Region, about 3,000 customers in the Greater Capital District, and up to 25,000 in the Catskill and Mid Hudson region of eastern New York.

## **NEW YORK, North**

|                       |    |         |  |  |   |   |  |  |            |
|-----------------------|----|---------|--|--|---|---|--|--|------------|
| <b>Clinton County</b> |    |         |  |  |   |   |  |  |            |
| Countywide            | 27 | 1000EST |  |  | 0 | 0 |  |  | Heavy Rain |
|                       |    | 2300EST |  |  |   |   |  |  |            |
| <b>Essex County</b>   |    |         |  |  |   |   |  |  |            |
| Countywide            | 27 | 1000EST |  |  | 0 | 0 |  |  | Heavy Rain |
|                       |    | 2300EST |  |  |   |   |  |  |            |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## NEW YORK, North

### Franklin County

|            |    |                    |  |  |   |   |  |  |            |
|------------|----|--------------------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1000EST<br>2300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|------------|----|--------------------|--|--|---|---|--|--|------------|

### St. Lawrence County

|            |    |                    |  |  |   |   |  |  |            |
|------------|----|--------------------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1000EST<br>2300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|------------|----|--------------------|--|--|---|---|--|--|------------|

The remnants of Tropical Storm Isidore moved northeast from the Ohio Valley on Friday, September 27th into New York state during the afternoon of the 27th and into Vermont Friday night, September 27th. Heavy rain accompanied this system with generally between 1 1/2 and 2 inches of rainfall reported. Amounts were locally higher in the mountains. Earlier in the month, September 14-15, the remnants of Tropical Storm Hannah resulted in rainfall of between 1/2 and 1 inch across northern New York. No flooding was reported with either event.

## NEW YORK, West

### Niagara County

|               |    |         |  |  |   |   |    |  |             |
|---------------|----|---------|--|--|---|---|----|--|-------------|
| Niagara Falls | 03 | 1113EST |  |  | 0 | 0 | 5K |  | Hail (0.75) |
|---------------|----|---------|--|--|---|---|----|--|-------------|

### Erie County

|              |    |         |  |  |   |   |    |  |             |
|--------------|----|---------|--|--|---|---|----|--|-------------|
| Grand Island | 03 | 1115EST |  |  | 0 | 0 | 5K |  | Hail (0.75) |
|--------------|----|---------|--|--|---|---|----|--|-------------|

### Cattaraugus County

|           |    |         |  |  |   |   |     |  |                         |
|-----------|----|---------|--|--|---|---|-----|--|-------------------------|
| Yorkshire | 03 | 1424EST |  |  | 0 | 0 | 25K |  | Thunderstorm Wind (G50) |
|-----------|----|---------|--|--|---|---|-----|--|-------------------------|

### Wyoming County

|      |    |         |  |  |   |   |     |  |                         |
|------|----|---------|--|--|---|---|-----|--|-------------------------|
| Pike | 03 | 1445EST |  |  | 0 | 0 | 10K |  | Thunderstorm Wind (G50) |
|------|----|---------|--|--|---|---|-----|--|-------------------------|

### Allegany County

|          |    |         |  |  |   |   |     |  |                         |
|----------|----|---------|--|--|---|---|-----|--|-------------------------|
| Rushford | 03 | 1450EST |  |  | 0 | 0 | 12K |  | Thunderstorm Wind (G50) |
|----------|----|---------|--|--|---|---|-----|--|-------------------------|

### Livingston County

|       |    |         |  |  |   |   |     |  |                         |
|-------|----|---------|--|--|---|---|-----|--|-------------------------|
| Nunda | 03 | 1500EST |  |  | 0 | 0 | 10K |  | Thunderstorm Wind (G50) |
|-------|----|---------|--|--|---|---|-----|--|-------------------------|

### Wyoming County

|              |    |         |  |  |   |   |    |  |                         |
|--------------|----|---------|--|--|---|---|----|--|-------------------------|
| Portageville | 03 | 1500EST |  |  | 0 | 0 | 8K |  | Thunderstorm Wind (G50) |
|--------------|----|---------|--|--|---|---|----|--|-------------------------|

### Oswego County

|         |    |         |  |  |   |   |    |  |                         |
|---------|----|---------|--|--|---|---|----|--|-------------------------|
| Palermo | 03 | 1600EST |  |  | 0 | 0 | 8K |  | Thunderstorm Wind (G50) |
|---------|----|---------|--|--|---|---|----|--|-------------------------|

A cold front brought severe thunderstorms to the region during the afternoon hours. The thunderstorm winds downed trees and power lines and scattered power outages were reported. In Yorkshire, Cattaraugus county, a tree fell on and damaged a garage. Over the Niagara Frontier, the thunderstorms produced hail up to 3/4 inch in diameter in Grand Island and Niagara Falls.

### Niagara County

|         |    |         |  |  |   |   |    |  |                         |
|---------|----|---------|--|--|---|---|----|--|-------------------------|
| Sanborn | 10 | 1955EST |  |  | 0 | 0 | 5K |  | Thunderstorm Wind (G50) |
|---------|----|---------|--|--|---|---|----|--|-------------------------|

### Orleans County

|        |    |         |  |  |   |   |    |  |                         |
|--------|----|---------|--|--|---|---|----|--|-------------------------|
| Medina | 10 | 2025EST |  |  | 0 | 0 | 8K |  | Thunderstorm Wind (G50) |
|--------|----|---------|--|--|---|---|----|--|-------------------------|

A cold front crossed the region during the evening hours. The thunderstorms that accompanied the front produced damaging winds that downed trees and limbs.

## NORTH CAROLINA, Central

### Durham County

|        |    |         |  |  |   |   |  |  |                         |
|--------|----|---------|--|--|---|---|--|--|-------------------------|
| Durham | 15 | 1611EST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G50) |
|--------|----|---------|--|--|---|---|--|--|-------------------------|

Trees and power lines were blown down.

### Nash County

|                      |    |                    |  |  |   |   |  |  |             |
|----------------------|----|--------------------|--|--|---|---|--|--|-------------|
| East Central Portion | 16 | 1014EST<br>1100EST |  |  | 0 | 0 |  |  | Flash Flood |
|----------------------|----|--------------------|--|--|---|---|--|--|-------------|

Several roads around Rocky Mount were flooded including Halifax Road, Country Club Drive, and Englewood School Road.

### Edgecombe County

|                   |    |                    |  |  |   |   |  |  |             |
|-------------------|----|--------------------|--|--|---|---|--|--|-------------|
| Northwest Portion | 16 | 1100EST<br>1200EST |  |  | 0 | 0 |  |  | Flash Flood |
|-------------------|----|--------------------|--|--|---|---|--|--|-------------|

Several roads off Highway 97 were closed due to flooding.

### Cumberland County

|              |    |                    |  |  |   |   |  |  |             |
|--------------|----|--------------------|--|--|---|---|--|--|-------------|
| Fayetteville | 18 | 1120EST<br>1200EST |  |  | 0 | 0 |  |  | Flash Flood |
|--------------|----|--------------------|--|--|---|---|--|--|-------------|

Flooding occurred on Doc Bennett Road.

### Guilford County

|         |    |                    |  |  |   |   |  |  |             |
|---------|----|--------------------|--|--|---|---|--|--|-------------|
| High Pt | 18 | 1355EST<br>1500EST |  |  | 0 | 0 |  |  | Flash Flood |
|---------|----|--------------------|--|--|---|---|--|--|-------------|

Surrat Drive was flooded, with several cars under water.



# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## NORTH CAROLINA, South Coastal

### **New Hanover County**

|                   |           |                            |  |  |          |          |  |  |                             |
|-------------------|-----------|----------------------------|--|--|----------|----------|--|--|-----------------------------|
| <b>Wilmington</b> | <b>15</b> | <b>1545EST<br/>1800EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Urban/Sml Stream Fld</b> |
|-------------------|-----------|----------------------------|--|--|----------|----------|--|--|-----------------------------|

The remnants of Tropical Storm Hanna spawned thunderstorms that dumped over two inches of rainfall in a short period of time, causing standing water on South Third Street near Greenfield Lake.

## NORTH CAROLINA, Southwest

### **Rowan County**

|                      |           |                            |  |  |          |          |  |  |              |
|----------------------|-----------|----------------------------|--|--|----------|----------|--|--|--------------|
| <b>8 E Salisbury</b> | <b>01</b> | <b>0000EST<br/>0400EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Flood</b> |
|----------------------|-----------|----------------------------|--|--|----------|----------|--|--|--------------|

Several creeks and roads flooded in the eastern part of the county. At least one vehicle succumbed to high water, and its occupants were stranded for some time.

### **Iredell County**

|                        |           |                |  |  |          |          |  |  |                    |
|------------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>6 N Statesville</b> | <b>04</b> | <b>1508EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Hail (0.75)</b> |
|------------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|

### **Polk County**

|               |           |                |  |  |          |          |  |  |                                |
|---------------|-----------|----------------|--|--|----------|----------|--|--|--------------------------------|
| <b>Saluda</b> | <b>14</b> | <b>1835EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Thunderstorm Wind (G50)</b> |
|---------------|-----------|----------------|--|--|----------|----------|--|--|--------------------------------|

Some trees were blown down.

### **Polk County**

|                   |           |                |  |  |          |          |  |  |                                |
|-------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------------------|
| <b>Sunny View</b> | <b>14</b> | <b>1835EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Thunderstorm Wind (G50)</b> |
|-------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------------------|

Some trees were blown down.

### **Cleveland County**

|                 |           |                |  |  |          |          |             |  |                  |
|-----------------|-----------|----------------|--|--|----------|----------|-------------|--|------------------|
| <b>Oakgrove</b> | <b>14</b> | <b>1930EST</b> |  |  | <b>0</b> | <b>0</b> | <b>100K</b> |  | <b>Lightning</b> |
|-----------------|-----------|----------------|--|--|----------|----------|-------------|--|------------------|

Lightning caused a fire at a home, destroying the house and its contents.

### **Cleveland County**

|               |           |                |  |  |          |          |           |  |                                |
|---------------|-----------|----------------|--|--|----------|----------|-----------|--|--------------------------------|
| <b>Shelby</b> | <b>14</b> | <b>1930EST</b> |  |  | <b>0</b> | <b>0</b> | <b>2K</b> |  | <b>Thunderstorm Wind (G50)</b> |
|---------------|-----------|----------------|--|--|----------|----------|-----------|--|--------------------------------|

A number of trees were blown down in and around Shelby.

**NCZ033>034-048>055-058>059-062>067 Avery - Caldwell - Madison - Yancey - Mitchell - Swain - Haywood - Buncombe - McDowell - Burke - Graham - Northern Jackson - Macon - Southern Jackson - Transylvania - Henderson - Polk - Rutherford**

|           |                |          |          |  |  |  |  |                    |
|-----------|----------------|----------|----------|--|--|--|--|--------------------|
| <b>26</b> | <b>2100EST</b> | <b>0</b> | <b>0</b> |  |  |  |  | <b>Gusty Winds</b> |
| <b>27</b> | <b>1400EST</b> |          |          |  |  |  |  |                    |

Strong winds developed over the mountains and foothills of North Carolina, as the remnants of tropical storm Isidore passed over the Tennessee and Ohio valleys. The combination of wind and wet soil from heavy rainfall resulted in some fallen trees and power lines in scattered locations. Winds did reach high wind criteria briefly in some areas.

**NCZ033-048>053-059-062>065 Avery - Madison - Yancey - Mitchell - Swain - Haywood - Buncombe - Northern Jackson - Macon - Southern Jackson - Transylvania - Henderson**

|           |                            |          |          |  |  |  |  |                        |
|-----------|----------------------------|----------|----------|--|--|--|--|------------------------|
| <b>27</b> | <b>0300EST<br/>1100EST</b> | <b>0</b> | <b>0</b> |  |  |  |  | <b>High Wind (G50)</b> |
|-----------|----------------------------|----------|----------|--|--|--|--|------------------------|

Winds associated with Isidore increased in the early morning hours across the North Carolina mountains, resulting in more widespread damage to trees and power lines. Widespread power outages were reported. Numerous roads were blocked by fallen trees, and a church tent was blown down and destroyed in Brevard.

### **NCZ062**

|                         |           |                            |  |  |          |          |  |  |              |
|-------------------------|-----------|----------------------------|--|--|----------|----------|--|--|--------------|
| <b>to<br/>Highlands</b> | <b>27</b> | <b>0800EST<br/>1100EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Flood</b> |
|-------------------------|-----------|----------------------------|--|--|----------|----------|--|--|--------------|

The Cullasaja River flooded part of Highway 64 near Highlands.

## NORTH DAKOTA, Central and West

### **Morton County**

|                    |           |                |  |  |          |          |  |  |                    |
|--------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>10 E Hebron</b> | <b>18</b> | <b>0821CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Hail (1.00)</b> |
|--------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|

### **Emmons County**

|                    |           |                |  |  |          |          |  |  |                    |
|--------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>10 W Linton</b> | <b>18</b> | <b>1645CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Hail (0.88)</b> |
|--------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|

### **Mcintosh County**

|                    |           |                |  |  |          |          |  |  |                    |
|--------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>10 N Ashley</b> | <b>18</b> | <b>1748CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Hail (1.00)</b> |
|--------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|

### **Mcintosh County**

|                     |           |                |  |  |          |          |  |  |                    |
|---------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>18 NE Ashley</b> | <b>18</b> | <b>1830CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Hail (0.88)</b> |
|---------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|

### **La Moure County**

|                     |           |                |  |  |          |          |  |  |                                |
|---------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------------------|
| <b>8 W La Moure</b> | <b>18</b> | <b>1844CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Thunderstorm Wind (G52)</b> |
|---------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------------------|

### **Dickey County**

|                        |           |                |  |  |          |          |  |  |                    |
|------------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>11 W Merricourt</b> | <b>18</b> | <b>1845CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Hail (1.75)</b> |
|------------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |         |                            |                           |                          |                      |   |                     |  |                         |
|--|---------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|--|-------------------------|
| Location   | Date    | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |  | Character of Storm      |
| Killed   | Injured | Property                   | Crops                     |                          |                      |   |                     |  |                         |
| <b><u>NORTH DAKOTA, East</u></b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Richland County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 10 W Wahpeton  | 01      | 0100CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| The hail was reported along Interstate 29.   |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Barnes County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 10 NW Litchville   | 02      | 0230CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Barnes County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 7 WNW Litchville   | 02      | 0245CST                    |                           |                          | 0                    | 0 | 0.50K               |  | Thunderstorm Wind       |
| Tree branches were snapped off in the wind.  |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Cass County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 5 S Horace   | 02      | 0500CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Cass County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 1 NW Embden  | 18      | 1345CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Cass County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 3 E Buffalo  | 18      | 1405CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Cass County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Page   | 18      | 1420CST<br>1437CST         |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Steele County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Colgate  | 18      | 1445CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Cass County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 1 W Lynchburg  | 18      | 1450CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Ransom County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 8 SE Sheldon   | 18      | 1451CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.75)             |
| <b>Cass County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 2 E Amenia   | 18      | 1528CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Pembina County</b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| Neché  | 18      | 1535CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G61) |
| <b>Richland County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 22 W Lithia  | 18      | 1535CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.88)             |
| <b>Cass County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 2 SW Mapleton  | 18      | 1600CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Cass County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 1 NW Fargo   | 18      | 1625CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Cass County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Fargo  | 18      | 1632CST<br>1832CST         |                           |                          | 0                    | 0 |                     |  | Flash Flood             |
| Street flooding was reported.  |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Cass County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Fargo  | 18      | 1650CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Richland County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 1.5 NE Christine   | 18      | 1652CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.00)             |
| <b><u>OHIO, East</u></b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Columbiana County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Homeworth  | 03      | 1720EST                    |                           |                          | 0                    | 0 | 2K                  |  | Thunderstorm Wind       |
| Thunderstorm winds downed a few trees.   |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Columbiana County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 5 NW East Liverpool  | 03      | 1730EST                    |                           |                          | 0                    | 0 | 10K                 |  | Thunderstorm Wind       |
| Thunderstorm winds downed a large tree onto a mobile home.   |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Tuscarawas County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Uhrichsville   | 03      | 1806EST                    |                           |                          | 0                    | 0 | 10K                 |  | Thunderstorm Wind       |
| Thunderstorm winds downed numerous trees and power lines in the Uhrichsville and Dennison area, blocking area roadways. Approximately 2,200 customers were without power across the region as a result of the storm. |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Harrison County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Cadiz  | 03      | 1828EST                    |                           |                          | 0                    | 0 | 10K                 |  | Thunderstorm Wind       |
| Thunderstorm winds downed numerous trees and power lines.  |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Jefferson County</b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| Smithfield   | 03      | 1840EST                    |                           |                          | 0                    | 0 | 5K                  |  | Thunderstorm Wind       |
| Thunderstorm winds downed several trees across area roadways, blocking traffic in and around the Smithfield area.  |         |                            |                           |                          |                      |   |                     |  |                         |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002  |      |                            |                           |                          |                      |   |                     |  |                    |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|--|--------------------|
| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |  | Character of Storm |
| <b>OHIO, East</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Belmont County</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Hendrysburg to<br>Barnesville   | 03   | 1915EST<br>1925EST         |                           |                          | 0                    | 0 | 5K                  |  | Thunderstorm Wind  |
| Thunderstorm winds downed several trees and power lines across State Route 800 from Hendrysburg to Barnesville. |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>OHIO, North</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Cuyahoga County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| North Royalton to<br>Cleveland  | 03   | 1430EST<br>1440EST         |                           |                          | 0                    | 0 | 5K                  |  | Thunderstorm Wind  |
| Thunderstorm winds downed large tree limbs in North Royalton and Cleveland.                                     |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Geauga County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Russell   | 03   | 1445EST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)        |
| Dime size hail was observed.  |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Trumbull County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Warren  | 03   | 1510EST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)        |
| Dime size hail was observed.  |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Summit County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Akron   | 03   | 1540EST                    |                           |                          | 0                    | 0 | 5K                  |  | Thunderstorm Wind  |
| Thunderstorm winds downed several large tree limbs.   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Portage County</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Kent  | 03   | 1550EST                    |                           |                          | 0                    | 0 | 5K                  |  | Hail (1.00)        |
| Quarter size hail was observed two miles south of Kent.   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Stark County</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Hartville to<br>Alliance  | 03   | 1600EST<br>1615EST         |                           |                          | 0                    | 0 | 5K                  |  | Thunderstorm Wind  |
| Thunderstorm winds downed one tree in Hartville and a large limb in Alliance.                                   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Trumbull County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Newton Falls  | 03   | 1605EST                    |                           |                          | 0                    | 0 | 6K                  |  | Thunderstorm Wind  |
| Thunderstorm winds downed three large trees.  |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Summit County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Akron   | 03   | 1610EST                    |                           |                          | 0                    | 0 | 5K                  |  | Thunderstorm Wind  |
| Thunderstorm winds downed one tree and a large limb.  |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Wayne County</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Wooster   | 03   | 1615EST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)        |
| Dime size hail was observed near Wooster.   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Mahoning County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Boardman  | 03   | 1630EST                    |                           |                          | 0                    | 0 | 25K                 |  | Thunderstorm Wind  |
| Thunderstorm winds downed two trees and several large limbs. A garage was damaged by a fallen tree.             |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Portage County</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Kent  | 03   | 1630EST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)        |
| Dime size hail was observed.  |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Mahoning County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Youngstown  | 03   | 1635EST<br>1645EST         |                           |                          | 0                    | 0 | 5K                  |  | Thunderstorm Wind  |
| Thunderstorm winds downed two trees.  |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Stark County</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Massillon   | 03   | 1640EST                    |                           |                          | 0                    | 0 | 5K                  |  | Hail (0.88)        |
| Nickel size hail was observed.  |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Knox County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Fredericktown to<br>Monroe Mills  | 03   | 1650EST<br>1700EST         |                           |                          | 0                    | 0 | 5K                  |  | Thunderstorm Wind  |
| Thunderstorm winds downed a large tree limb in Fredericktown and a tree near Apple Valley Lake.                 |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Stark County</b>   |      |                            |                           |                          |                      |   |                     |  |                    |
| Alliance  | 03   | 1658EST                    |                           |                          | 0                    | 0 | 5K                  |  | Thunderstorm Wind  |
| Thunderstorm winds downed a few large tree limbs.   |      |                            |                           |                          |                      |   |                     |  |                    |
| <b>Holmes County</b>  |      |                            |                           |                          |                      |   |                     |  |                    |
| Millersburg   | 03   | 1706EST                    |                           |                          | 0                    | 0 | 5K                  |  | Hail (1.00)        |
| Quarter size hail was observed south of Millersburg.  |      |                            |                           |                          |                      |   |                     |  |                    |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location                | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm  |
|-------------------------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|---|
| <b>OHIO, North</b>      |      |                            |                           |                          |  |                                       |   |
| <b>Stark County</b>     |      |                            |                           |                          |  |                                       |   |
| Alliance                | 03   | 1710EST                    |                           |                          | 0 0                                    | 30K                                   | Thunderstorm Wind   |
|                         |      |                            |                           |                          |  |                                       | Thunderstorm winds downed a few trees and power poles. A home was damaged by a fallen tree.   |
| <b>Holmes County</b>    |      |                            |                           |                          |  |                                       |   |
| Millersburg             | 03   | 1715EST                    |                           |                          | 0 0                                    | 10K                                   | Thunderstorm Wind   |
|                         |      |                            |                           |                          |  |                                       | Thunderstorm winds downed several trees west of Millersburg.  |
| <b>Mahoning County</b>  |      |                            |                           |                          |  |                                       |   |
| Boardman                | 03   | 1715EST                    |                           |                          | 0 0                                    | 15K                                   | Thunderstorm Wind   |
|                         |      |                            |                           |                          |  |                                       | Thunderstorm winds downed several trees.  |
| <b>Holmes County</b>    |      |                            |                           |                          |  |                                       |   |
| Charm                   | 03   | 1725EST                    |                           |                          | 0 0                                    | 2K                                    | Thunderstorm Wind   |
|                         |      |                            |                           |                          |  |                                       | Thunderstorm winds downed a couple large tree limbs three miles south of Charm.   |
| <b>Ottawa County</b>    |      |                            |                           |                          |  |                                       |   |
| Marblehead              | 14   | 1620EST                    |                           |                          | 0 0                                    | 25K                                   | Thunderstorm Wind   |
|                         |      |                            |                           |                          |  |                                       | Thunderstorm winds downed several trees and large limbs. A home was damaged by a fallen limb.   |
| <b>Huron County</b>     |      |                            |                           |                          |  |                                       |   |
| Norwalk                 | 14   | 1656EST                    |                           |                          | 0 0                                    |                                       | Hail (0.75)   |
|                         |      |                            |                           |                          |  |                                       | Dime size hail was observed.  |
| <b>Lorain County</b>    |      |                            |                           |                          |  |                                       |   |
| La Grange               | 14   | 1810EST<br>1813EST         |                           |                          | 0 0                                    | 5K                                    | Hail (1.00)   |
|                         |      |                            |                           |                          |  |                                       | Dime to quarter size hail was observed.   |
| <b>Lorain County</b>    |      |                            |                           |                          |  |                                       |   |
| La Grange               | 14   | 1810EST<br>1815EST         |                           |                          | 0 0                                    | 35K                                   | Thunderstorm Wind   |
|                         |      |                            |                           |                          |  |                                       | Thunderstorm winds downed several trees. At least two cars were damaged by the trees.   |
| <b>Lorain County</b>    |      |                            |                           |                          |  |                                       |   |
| La Grange               | 14   | 1815EST                    |                           |                          | 0 0                                    | 25K                                   | Hail (1.50)   |
|                         |      |                            |                           |                          |  |                                       | Walnut size hail was observed.  |
| <b>Lorain County</b>    |      |                            |                           |                          |  |                                       |   |
| Grafton to<br>Elyria    | 14   | 1855EST<br>1900EST         |                           |                          | 0 0                                    | 15K                                   | Thunderstorm Wind   |
|                         |      |                            |                           |                          |  |                                       | Thunderstorm winds downed several trees in Elyria and a few large limbs in Grafton.   |
| <b>Medina County</b>    |      |                            |                           |                          |  |                                       |   |
| Chatham                 | 14   | 1902EST                    |                           |                          | 0 0                                    | 10K                                   | Hail (1.50)   |
|                         |      |                            |                           |                          |  |                                       | Walnut size hail was observed.  |
| <b>Summit County</b>    |      |                            |                           |                          |  |                                       |   |
| Bath                    | 14   | 2000EST                    |                           |                          | 0 0                                    | 4K                                    | Hail (0.88)   |
|                         |      |                            |                           |                          |  |                                       | Nickel size hail was observed.  |
| <b>Ashtabula County</b> |      |                            |                           |                          |  |                                       |   |
| Countywide              | 15   | 1330EST<br>1500EST         |                           |                          | 0 0                                    | 50K                                   | Flash Flood   |
|                         |      |                            |                           |                          |  |                                       | Thunderstorms dumped up to three inches of rain in less than two hours causing widespread flooding in Ashtabula County. Several roads were washed out and many underpasses were also flooded. |
| <b>Summit County</b>    |      |                            |                           |                          |  |                                       |   |
| Sagamore Hills          | 19   | 0402EST                    |                           |                          | 0 0                                    |                                       | Hail (0.75)   |
|                         |      |                            |                           |                          |  |                                       | Dime size hail was observed.  |
| <b>Cuyahoga County</b>  |      |                            |                           |                          |  |                                       |   |
| Solon                   | 19   | 0445EST                    |                           |                          | 0 0                                    | 25K                                   | Thunderstorm Wind   |
|                         |      |                            |                           |                          |  |                                       | Thunderstorm winds downed a tree and a large limb. The fallen tree damaged a house.   |
| <b>Hancock County</b>   |      |                            |                           |                          |  |                                       |   |
| Mc Comb                 | 19   | 1830EST                    |                           |                          | 0 0                                    | 20K                                   | Thunderstorm Wind   |
|                         |      |                            |                           |                          |  |                                       | Thunderstorm winds downed several trees and large limbs. At least one car was damaged by fallen trees.  |
| <b>Wood County</b>      |      |                            |                           |                          |  |                                       |   |
| Bowling Green           | 19   | 1832EST                    |                           |                          | 0 0                                    | 5K                                    | Thunderstorm Wind   |
|                         |      |                            |                           |                          |  |                                       | Thunderstorm winds snapped a power pole.  |
| <b>Wood County</b>      |      |                            |                           |                          |  |                                       |   |
| Perrysburg              | 19   | 1840EST                    |                           |                          | 0 0                                    | 2K                                    | Thunderstorm Wind   |
|                         |      |                            |                           |                          |  |                                       | Thunderstorm winds downed one large tree limb.  |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |      |                            |                           |                          |                      |         |                     |       |                                      |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm                   |
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                                      |
| <b><u>OHIO, North</u></b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Sandusky County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Woodville  | 19   | 1855EST                    |                           |                          | 0                    | 0       | 10K                 |       | Thunderstorm Wind                    |
| Thunderstorm winds downed three large trees.   |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Ottawa County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Genoa  | 19   | 1900EST                    |                           |                          | 0                    | 0       | 10K                 |       | Thunderstorm Wind                    |
| Thunderstorm winds snapped a power pole and downed several large tree limbs.   |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Marion County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Marion   | 19   | 2030EST                    |                           |                          | 0                    | 0       | 5K                  |       | Thunderstorm Wind                    |
| Thunderstorm winds downed a few large tree limbs.  |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Huron County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| Olena  | 20   | 1445EST                    |                           |                          | 0                    | 0       | 5K                  |       | Thunderstorm Wind                    |
| Thunderstorm winds downed two very large trees.  |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Erie County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Vermilion  | 20   | 1500EST                    |                           |                          | 0                    | 0       | 5K                  |       | Thunderstorm Wind                    |
| Thunderstorm winds downed a few large tree limbs.  |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Lorain County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Vermilion On The Lk to Lorain  | 20   | 1505EST<br>1520EST         |                           |                          | 0                    | 0       | 4K                  |       | Thunderstorm Wind                    |
| Thunderstorm winds downed one large tree limb in Vermilion on the Lake and one tree in Lorain.   |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Marion County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Prospect   | 20   | 1645EST                    |                           |                          | 0                    | 0       | 10K                 |       | Thunderstorm Wind                    |
| Thunderstorm winds downed several trees.   |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Crawford County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Galion   | 20   | 1708EST                    |                           |                          | 0                    | 0       | 25K                 |       | Thunderstorm Wind (G52)              |
| Thunderstorm winds estimated at 60 mph downed many trees.  |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Crawford County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Crestline  | 20   | 1712EST                    |                           |                          | 0                    | 2       | 200K                |       | Thunderstorm Wind (G52)              |
| Thunderstorm winds estimated to be in excess of 60 mph caused considerable damage in Crestline. A portion of a temporary stage collapsed at an outdoor festival. Two people were seriously injured with nine others sustaining minor injuries. The two seriously injured required extended hospitalization. Dozens of trees were downed. At least two homes and two cars were severely damaged by fallen trees.  |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Sandusky County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Clyde  | 20   | 1715EST                    |                           |                          | 0                    | 0       | 5K                  |       | Thunderstorm Wind                    |
| Thunderstorm winds downed several large tree limbs.  |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Richland County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Shelby   | 20   | 1725EST                    |                           |                          | 0                    | 0       | 10K                 |       | Thunderstorm Wind                    |
| Thunderstorm winds downed several trees near Shelby.   |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b><u>OHIO, Northwest</u></b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Van Wert County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Scott to Van Wert  | 19   | 1730EST<br>1732EST         |                           |                          | 0                    | 0       | 0                   |       | Thunderstorm Wind                    |
| Tree and power lines were blown down in Scott and Van Wert.  |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Allen County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| Spencerville   | 20   | 1515EST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G56) <sup>M</sup> |
| Emergency management reported a tree down as a result of the wind gust.  |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Allen County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| 5 E Delphos  | 20   | 1541EST<br>1542EST         | 0.1                       | 25                       | 0                    | 0       | 50K                 |       | Tornado (F1)                         |
| Emergency management reported power lines and large trees were blown down. 6 homes suffered shingle and window damage.   |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Putnam County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| 1 W Vaughnsville   | 20   | 1545EST                    |                           |                          | 0                    | 0       | 0                   |       | Thunderstorm Wind                    |
| Storm spotters reported power lines down in the area.  |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Van Wert County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Van Wert to 3 NNE Van Wert   | 20   | 1615EST<br>1617EST         | 4                         | 100                      | 0                    | 0       |                     |       | Tornado (F0)                         |
| County Emergency Management reported the tornado touched down at 300 yards north of Kear Road in the city of Van Wert and 300 yards east of John Brown Road. It continued on the ground for around 4 miles, causing roof damage to 3 homes, as numerous trees twisted and snapped. A barn was also damaged by the tornado. The tornado lifted 1 mile east of US-127 and 1/2 mile north of Convoy Rd. There was another brief touchdown at US-127 and 1/2 mile north of Fife Road, where the tornado traveled roughly 100 yards before dissipating. |      |                            |                           |                          |                      |         |                     |       |                                      |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## OHIO, Southeast

**OHZ066>067-075>076- Perry - Morgan - Athens - Washington - Jackson - Vinton - Meigs - Gallia - Lawrence**  
**083>087**

|           |                |          |          |                |
|-----------|----------------|----------|----------|----------------|
| <b>01</b> | <b>0000EST</b> | <b>0</b> | <b>0</b> | <b>Drought</b> |
| <b>25</b> | <b>2300EST</b> |          |          |                |

The emerging drought from August peaked during the first 2 weeks of September, as hot and dry conditions lingered. Rains of 1.5 to 2 inches, plus cooler temperatures, dampened the drought by the fourth week of the month.

## OHIO, Southwest

### Licking County

Utica

|           |                |          |          |           |                                |
|-----------|----------------|----------|----------|-----------|--------------------------------|
| <b>03</b> | <b>1740EST</b> | <b>0</b> | <b>0</b> | <b>3K</b> | <b>Thunderstorm Wind (G50)</b> |
|           | <b>1743EST</b> |          |          |           |                                |

Numerous trees were downed across the northern part of the county.

### Licking County

5 E St Louisville

|           |                |          |          |           |                                |
|-----------|----------------|----------|----------|-----------|--------------------------------|
| <b>03</b> | <b>1805EST</b> | <b>0</b> | <b>0</b> | <b>3K</b> | <b>Thunderstorm Wind (G50)</b> |
|           | <b>1809EST</b> |          |          |           |                                |

Large limbs and powerlines were knocked down.

### Warren County

Franklin

|           |                |          |          |           |                                |
|-----------|----------------|----------|----------|-----------|--------------------------------|
| <b>18</b> | <b>1705EST</b> | <b>0</b> | <b>0</b> | <b>3K</b> | <b>Thunderstorm Wind (G50)</b> |
|           | <b>1708EST</b> |          |          |           |                                |

Trees were blown down.

### Warren County

Harveysburg

|           |                |          |          |            |                                |
|-----------|----------------|----------|----------|------------|--------------------------------|
| <b>18</b> | <b>1750EST</b> | <b>0</b> | <b>0</b> | <b>25K</b> | <b>Thunderstorm Wind (G60)</b> |
|           | <b>1755EST</b> |          |          |            |                                |

Major structural damage was done to the city maintenance building and three homes. Numerous large trees were also downed across the village. Possibly a microburst.

### Clinton County

3 NW Wilmington

|           |                |          |          |  |                    |
|-----------|----------------|----------|----------|--|--------------------|
| <b>18</b> | <b>1815EST</b> | <b>0</b> | <b>0</b> |  | <b>Hail (0.75)</b> |
|           | <b>1817EST</b> |          |          |  |                    |

### Fairfield County

3 W Amanda

|           |                |          |          |           |                                |
|-----------|----------------|----------|----------|-----------|--------------------------------|
| <b>18</b> | <b>1845EST</b> | <b>0</b> | <b>0</b> | <b>3K</b> | <b>Thunderstorm Wind (G50)</b> |
|           | <b>1848EST</b> |          |          |           |                                |

Trees were downed near the intersection of US 22 and Justus Road.

### Franklin County

Bexley

|           |                |          |          |           |                                |
|-----------|----------------|----------|----------|-----------|--------------------------------|
| <b>18</b> | <b>2015EST</b> | <b>0</b> | <b>0</b> | <b>3K</b> | <b>Thunderstorm Wind (G50)</b> |
|           | <b>2019EST</b> |          |          |           |                                |

Large limbs were knocked down across the southeast side of Columbus. There were also a few trees blown down in the western suburbs.

### Warren County

Maineville

|           |                |          |          |           |                                |
|-----------|----------------|----------|----------|-----------|--------------------------------|
| <b>20</b> | <b>1540EST</b> | <b>0</b> | <b>0</b> | <b>3K</b> | <b>Thunderstorm Wind (G50)</b> |
|           | <b>1543EST</b> |          |          |           |                                |

Trees were knocked down.

### Darke County

Union City

|           |                |          |          |            |   |
|-----------|----------------|----------|----------|------------|---|
| <b>20</b> | <b>1550EST</b> | <b>0</b> | <b>0</b> | <b>10K</b> | <b>Thunderstorm Wind (G51) <sup>M</sup></b> |
|-----------|----------------|----------|----------|------------|---|

A 30-foot high wall on a livestock building collapsed on the outskirts of town.

### Mercer County

Countywide

|           |                |          |          |           |                                |
|-----------|----------------|----------|----------|-----------|--------------------------------|
| <b>20</b> | <b>1555EST</b> | <b>0</b> | <b>0</b> | <b>5K</b> | <b>Thunderstorm Wind (G50)</b> |
|           | <b>1610EST</b> |          |          |           |                                |

Several trees were downed across the county.

### Warren County

Waynesville

|           |                |          |          |           |                                |
|-----------|----------------|----------|----------|-----------|--------------------------------|
| <b>20</b> | <b>1555EST</b> | <b>0</b> | <b>0</b> | <b>3K</b> | <b>Thunderstorm Wind (G50)</b> |
|           | <b>1558EST</b> |          |          |           |                                |

Numerous trees were blown down in the village.

### Clinton County

Port William

|           |                |          |          |            |                                |
|-----------|----------------|----------|----------|------------|--------------------------------|
| <b>20</b> | <b>1600EST</b> | <b>0</b> | <b>0</b> | <b>25K</b> | <b>Thunderstorm Wind (G60)</b> |
|           | <b>1605EST</b> |          |          |            |                                |

A roof was ripped off of a hog barn on Sabina Road. Other barns on Starbuck Road sustained minor structural damage, and numerous trees were downed across the northern part of the county.

### Greene County

7 SE Xenia

|           |                |          |          |           |                                |
|-----------|----------------|----------|----------|-----------|--------------------------------|
| <b>20</b> | <b>1606EST</b> | <b>0</b> | <b>0</b> | <b>3K</b> | <b>Thunderstorm Wind (G50)</b> |
|           | <b>1609EST</b> |          |          |           |                                |

Numerous trees were downed across the southeast part of the county.

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002  |      |                            |                           |                          |                      |   |                     |       |   |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|-------|---|
| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage | Crops | Character of Storm  |
| <b><u>OHIO, Southwest</u></b>   |      |                            |                           |                          |                      |   |                     |       |   |
| <b>Auglaize County</b>  |      |                            |                           |                          |                      |   |                     |       |   |
| 3 S St Marys  | 20   | 1636EST<br>1638EST         |                           |                          | 0                    | 0 | 3K                  |       | Thunderstorm Wind (G50)   |
| Several trees were knocked down on Tri Township Road and Route 66A.   |      |                            |                           |                          |                      |   |                     |       |   |
| <b>Fayette County</b>   |      |                            |                           |                          |                      |   |                     |       |   |
| 1 N Jeffersonville  | 20   | 1650EST<br>1653EST         |                           |                          | 0                    | 0 | 3K                  |       | Thunderstorm Wind (G50)   |
| Twelve trees measuring between one and two feet in diameter, were knocked down along State Route 41 between Blessing Chapel Road and Cartville Road.  |      |                            |                           |                          |                      |   |                     |       |   |
| <b>Madison County</b>   |      |                            |                           |                          |                      |   |                     |       |   |
| South Solon   | 20   | 1655EST<br>1658EST         |                           |                          | 0                    | 0 | 3K                  |       | Thunderstorm Wind (G50)   |
| Trees and power poles were downed in town.  |      |                            |                           |                          |                      |   |                     |       |   |
| <b>OHZ044&gt;045-052&gt;053-061&gt;062-070&gt;071-071-077</b>   |      |                            |                           |                          |                      |   |                     |       | <b>Logan - Union - Champaign - Clark - Montgomery - Greene - Butler - Warren - Hamilton</b> |
|   | 27   | 0500EST<br>1030EST         |                           |                          | 0                    | 0 | 25K                 |       | Flood   |
| The remnants of Tropical Storm Isidore tracked into the Ohio Valley during the early and mid morning hours, spreading a large area of heavy tropical rains into southwest and west central Ohio. The heaviest rain fell from just west of Cincinnati north into the Miami Valley and Dayton metropolitan area. Rainfall amounts in these areas were between four and six inches, with a large area of two to four inch rainfall elsewhere. High water caused problems on numerous roadways throughout this region. An antique shop on West Wyoming Road in the western Cincinnati suburbs suffered a roof collapse from water buildup. Two cars were trapped in high water on Somersville-Jacksonburg Road and occupants had to be rescued. Manhole covers throughout Dayton were being blown off due to intense buildup of water pressure. |      |                            |                           |                          |                      |   |                     |       |   |
| <b>Miami County</b>   |      |                            |                           |                          |                      |   |                     |       |   |
| Countywide  | 27   | 0730EST<br>0810EST         |                           |                          | 0                    | 0 |                     |       | Flash Flood   |
| High water problems closed numerous roads throughout the county.  |      |                            |                           |                          |                      |   |                     |       |   |
| <b>Montgomery County</b>  |      |                            |                           |                          |                      |   |                     |       |   |
| Dayton  | 27   | 0730EST<br>0810EST         |                           |                          | 0                    | 0 |                     |       | Flash Flood   |
| Numerous roads were flooded throughout the Dayton metropolitan area. A man had to be rescued when he drove his car into a flooded retention pond near the Dayton Mall.  |      |                            |                           |                          |                      |   |                     |       |   |
| <b><u>OKLAHOMA, Eastern</u></b>   |      |                            |                           |                          |                      |   |                     |       |   |
| <b>Osage County</b>   |      |                            |                           |                          |                      |   |                     |       |   |
| Burbank   | 13   | 1535CST                    |                           |                          | 0                    | 0 |                     |       | Thunderstorm Wind (G56) <sup>M</sup>  |
| <b>Osage County</b>   |      |                            |                           |                          |                      |   |                     |       |   |
| 10 W Burbank  | 18   | 2029CST                    |                           |                          | 0                    | 0 |                     |       | Thunderstorm Wind (G61)   |
| Thunderstorm winds estimated at 70 miles an hour blew down a tree near Kaw Lake.  |      |                            |                           |                          |                      |   |                     |       |   |
| <b>Nowata County</b>  |      |                            |                           |                          |                      |   |                     |       |   |
| South Coffeyville   | 18   | 2153CST                    |                           |                          | 0                    | 0 |                     |       | Thunderstorm Wind (G52)   |
| Thunderstorm winds estimated at 60 miles an hour blew down several large tree limbs.  |      |                            |                           |                          |                      |   |                     |       |   |
| <b>Pawnee County</b>  |      |                            |                           |                          |                      |   |                     |       |   |
| Maramec   | 18   | 2220CST                    |                           |                          | 0                    | 0 |                     |       | Thunderstorm Wind (G52)   |
| <b>Tulsa County</b>   |      |                            |                           |                          |                      |   |                     |       |   |
| Broken Arrow  | 19   | 0040CST                    |                           |                          | 0                    | 0 |                     |       | Thunderstorm Wind (G52)   |
| Thunderstorm winds estimated at 60 miles an hour blew down several large tree limbs.  |      |                            |                           |                          |                      |   |                     |       |   |
| <b><u>OKLAHOMA, Extreme Southeast</u></b>   |      |                            |                           |                          |                      |   |                     |       |   |
| NONE REPORTED.  |      |                            |                           |                          |                      |   |                     |       |   |
| <b><u>OKLAHOMA, Panhandle</u></b>   |      |                            |                           |                          |                      |   |                     |       |   |
| <b>Cimarron County</b>  |      |                            |                           |                          |                      |   |                     |       |   |
| Felt  | 13   | 1446CST                    |                           |                          | 0                    | 0 |                     |       | Hail (1.75)   |
| <b>Cimarron County</b>  |      |                            |                           |                          |                      |   |                     |       |   |
| 10 SW Griggs  | 13   | 1555CST                    |                           |                          | 0                    | 0 |                     |       | Hail (1.75)   |
| Severe thunderstorm containing large hail moved across the western Oklahoma panhandle during the mid to late afternoon hours.   |      |                            |                           |                          |                      |   |                     |       |   |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002  |         |                            |                           |                          |                      |   |                     |  |                                      |
|---|---------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|--|--------------------------------------|
| Location  | Date    | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |  | Character of Storm                   |
| Killed  | Injured | Property                   | Crops                     |                          |                      |   |                     |  |                                      |
| <b><u>OKLAHOMA, Western, Central and Southeast</u></b>  |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Kingfisher County</b>  |         |                            |                           |                          |                      |   |                     |  |                                      |
| 2 NE Kingfisher   | 12      | 1545CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G54) <sup>M</sup> |
| Wind was measured by the Oklahoma mesonet.  |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Kay County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| 3 E Tonkawa   | 13      | 1400CST                    |                           |                          | 0                    | 0 | 0.01K               |  | Thunderstorm Wind                    |
| Tree limbs were blown down on Highway 60.   |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Kay County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| 2 E Tonkawa   | 13      | 1400CST                    |                           |                          | 0                    | 0 | 0.50K               |  | Thunderstorm Wind                    |
| Highway signs were blown down on Interstate 35.   |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Oklahoma County</b>  |         |                            |                           |                          |                      |   |                     |  |                                      |
| Oklahoma City   | 14      | 1740CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52)              |
| <b>Pontotoc County</b>  |         |                            |                           |                          |                      |   |                     |  |                                      |
| 5 ENE Ada to<br>5 ESE Ada   | 14      | 2000CST<br>2010CST         |                           |                          | 0                    | 0 | 60K                 |  | Thunderstorm Wind                    |
| Severe straight-line winds produced an intermittent path of damage on the east side of Ada that was about four miles long and three-quarters of a mile wide, and extended from northwest through southeast. The roof of a dairy barn was blown off. Several barns and outbuildings were destroyed, and dozens of trees were blown over. |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Pontotoc County</b>  |         |                            |                           |                          |                      |   |                     |  |                                      |
| 2 S Francis   | 14      | 2000CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)                          |
| <b>Pontotoc County</b>  |         |                            |                           |                          |                      |   |                     |  |                                      |
| 2 S Francis   | 14      | 2000CST                    |                           |                          | 0                    | 0 | 0.01K               |  | Thunderstorm Wind                    |
| Six inch diameter tree limbs were downed.   |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Coal County</b>  |         |                            |                           |                          |                      |   |                     |  |                                      |
| Centrahoma  | 14      | 2030CST                    |                           |                          | 0                    | 0 | 0.01K               |  | Thunderstorm Wind                    |
| Six inch diameter tree limbs were downed.   |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Jackson County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Altus Afb   | 18      | 1524CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G57) <sup>M</sup> |
| <b>Jackson County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Altus Afb   | 18      | 1530CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G59) <sup>M</sup> |
| <b>Kiowa County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Hobart  | 18      | 1546CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G64) <sup>M</sup> |
| <b>Kiowa County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Hobart  | 18      | 1550CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G74) <sup>M</sup> |
| <b>Washita County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| 2 N Lake Vly  | 18      | 1615CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)                          |
| <b>Kiowa County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| 3 SSE Cooperton   | 18      | 1630CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)                          |
| <b>Greer County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Mangum  | 18      | 1705CST                    |                           |                          | 0                    | 0 | 30K                 |  | Thunderstorm Wind                    |
| A roof of a restaurant was damaged. Trees were downed. Windows were broken, and carports were blown off of two homes.   |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Grant County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| .5 W Nash to<br>1 N Nash  | 18      | 1716CST<br>1719CST         | 1                         | 200                      | 0                    | 0 | 0                   |  | Tornado (F0)                         |
| This brief tornado was captured on video and resulted in no damage.   |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Caddo County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Boone   | 18      | 1720CST                    |                           |                          | 0                    | 0 |                     |  | Hail (4.50)                          |
| <b>Alfalfa County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| 3 N Goltry  | 18      | 1727CST                    |                           |                          | 0                    | 0 | 0.50K               |  | Thunderstorm Wind                    |
| Power lines were downed.  |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Grant County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| 4 NW Medford  | 18      | 1735CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.88)                          |
| <b>Washita County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Sentinel  | 18      | 1745CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.00)                          |
| <b>Washita County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Sentinel  | 18      | 1745CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G61)              |
| <b>Custer County</b>  |         |                            |                           |                          |                      |   |                     |  |                                      |
| 5 SW Butler   | 18      | 1750CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G69) <sup>M</sup> |
| Wind was measured by the Oklahoma mesonet.  |         |                            |                           |                          |                      |   |                     |  |                                      |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |      |                            |                           |                          |                      |         |                     |       |                                      |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm                   |
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                                      |
| <b><u>OKLAHOMA, Western, Central and Southeast</u></b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Blaine County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| 1 NW Homestead   | 18   | 1800CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G52)              |
| <b>Major County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| 8 SE Fairview  | 18   | 1800CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G52)              |
| <b>Custer County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| 4 W Arapaho  | 18   | 1815CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.25)                          |
| <b>Dewey County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| Putnam   | 18   | 1815CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)                          |
| <b>Dewey County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| Putnam   | 18   | 1815CST                    |                           |                          | 0                    | 0       | 0.50K               |       | Thunderstorm Wind (G69)              |
| Power lines were downed.   |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Garfield County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Lahoma   | 18   | 1815CST                    |                           |                          | 0                    | 0       | 0.01K               |       | Thunderstorm Wind                    |
| Large tree limbs were downed.  |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Caddo County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| 5 SW Anadarko  | 18   | 1820CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.88)                          |
| <b>Dewey County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| 3 N Putnam   | 18   | 1825CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G64) <sup>M</sup> |
| Wind was measured by the Oklahoma mesonet.   |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Kay County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| 5 NW Blackwell   | 18   | 1829CST<br>1830CST         | 0.3                       | 25                       | 0                    | 0       | 0                   |       | Tornado (F0)                         |
| This brief, non-mesocyclonic tornado was captured on video by storm chasers. No damage was observed or reported. |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Grant County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| Jefferson  | 18   | 1830CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G52)              |
| <b>Grant County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| 5 E Nash   | 18   | 1830CST                    |                           |                          | 0                    | 0       | 25K                 |       | Thunderstorm Wind                    |
| Five power poles were downed on US 64, one landing on a vehicle.   |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Major County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| 4 SE Isabella  | 18   | 1845CST                    |                           |                          | 0                    | 0       | 0.50K               |       | Thunderstorm Wind                    |
| A one foot diameter tree was blown over.   |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Kay County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| Nardin   | 18   | 1850CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G61)              |
| <b>Kay County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| 4 NW Blackwell   | 18   | 1857CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)                          |
| <b>Kay County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| 1 W Tonkawa  | 18   | 1900CST                    |                           |                          | 0                    | 0       | 1K                  |       | Thunderstorm Wind                    |
| A shed was blown over.   |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Kay County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| 1 N Braman   | 18   | 1907CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.75)                          |
| <b>Kay County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| 1 W Blackwell  | 18   | 1910CST                    |                           |                          | 0                    | 0       | 2K                  |       | Thunderstorm Wind                    |
| The roof of a barn was blown off.  |      |                            |                           |                          |                      |         |                     |       |                                      |
| <b>Garfield County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Enid   | 18   | 1915CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)                          |
| <b>Kay County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| Braman   | 18   | 1916CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)                          |
| <b>Kay County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| Braman   | 18   | 1916CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)                          |
| <b>Kay County</b>  |      |                            |                           |                          |                      |         |                     |       |                                      |
| Ponca City   | 18   | 1917CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G55) <sup>M</sup> |
| <b>Garfield County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Enid   | 18   | 1920CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.88)                          |
| <b>Garfield County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Enid   | 18   | 1920CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.88)                          |
| <b>Blaine County</b>   |      |                            |                           |                          |                      |         |                     |       |                                      |
| Longdale   | 18   | 1930CST                    |                           |                          | 0                    | 0       | 0.50K               |       | Thunderstorm Wind                    |
| A ten inch diameter tree was downed.   |      |                            |                           |                          |                      |         |                     |       |                                      |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |         |                            |                           |                          |                      |   |                     |  |                         |
|--|---------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|--|-------------------------|
| Location   | Date    | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |  | Character of Storm      |
| Killed   | Injured | Property                   | Crops                     |                          |                      |   |                     |  |                         |
| <b><u>OKLAHOMA, Western, Central and Southeast</u></b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Caddo County</b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| 1 S Hinton   | 18      | 1930CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Blaine County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Homestead  | 18      | 1940CST                    |                           |                          | 0                    | 0 | 0.50K               |  | Thunderstorm Wind       |
| Power lines were downed.   |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Canadian County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 3 W Karnes Station   | 18      | 1940CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G61) |
| <b>Kingfisher County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 3 N Hennessey  | 18      | 1940CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52) |
| <b>Canadian County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 3 W Karnes Station   | 18      | 1950CST                    |                           |                          | 0                    | 0 |                     |  | Hail (2.75)             |
| <b>Garfield County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Garber   | 18      | 2000CST                    |                           |                          | 0                    | 0 | 2K                  |  | Thunderstorm Wind       |
| Trees were downed.   |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Canadian County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 3 W Karnes Station   | 18      | 2020CST                    |                           |                          | 0                    | 0 |                     |  | Hail (1.00)             |
| <b>Jackson County</b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| 6 SW Duke  | 18      | 2035CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G69) |
| <b>Kingfisher County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Okarche  | 18      | 2040CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52) |
| <b>Kay County</b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| Ponca City   | 18      | 2043CST                    |                           |                          | 0                    | 0 | 0                   |  | Flash Flood             |
| Numerous streets were covered with water.  |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Canadian County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 1 W Okarche  | 18      | 2045CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Logan County</b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| 4 SW Navina  | 18      | 2105CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.88)             |
| <b>Oklahoma County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 6 NW Edmond  | 18      | 2120CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52) |
| <b>Kingfisher County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Cashion  | 18      | 2127CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)             |
| <b>Kingfisher County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Cashion  | 18      | 2127CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52) |
| <b>Payne County</b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| 6 W Stillwater   | 18      | 2205CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.88)             |
| A large line of strong to severe thunderstorms developed over western Oklahoma during the late afternoon of the 18th and moved eastward as the evening progressed. Mangum, in Greer County, sustained structural damage inside the city limits, and there were two, brief, weak tornadoes verified over northern Oklahoma. One tornado formed near Nash in Grant County, while the other formed near Braman in Kay County. Both tornadoes were rated F0. |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Johnston County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 4 NE Tishomingo  | 19      | 0510CST                    |                           |                          | 0                    | 0 | 50K                 |  | Thunderstorm Wind       |
| A large tree limb fell through the roof of a house, and a tree fell on two vehicles.   |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Garvin County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| 4 N Elmore City  | 27      | 0300CST                    |                           |                          | 0                    | 0 | 4K                  |  | Thunderstorm Wind       |
| Trees were downed, and a barn was destroyed.   |         |                            |                           |                          |                      |   |                     |  |                         |
| <b><u>OREGON, Central and East</u></b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Wallowa County</b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| 6 SW Wallowa   | 15      | 1330PST                    |                           |                          | 0                    | 0 |                     |  | Wild/Forest Fire        |
|  | 19      | 2359PST                    |                           |                          |                      |   |                     |  |                         |
| Around 200 firefighters were assigned to the Anniversary fire, which was sparked by lightning on an unknown date near the bottom of Big Canyon. Three engines, one dozer, four air tankers, one helicopter, and two water tenders were assigned to this fire, which burned 290 acres.  |         |                            |                           |                          |                      |   |                     |  |                         |
| <b><u>OREGON, Northwest</u></b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| <b>Marion County</b>   |         |                            |                           |                          |                      |   |                     |  |                         |
| Mt Angel   | 30      | 1430PST<br>1600PST         |                           |                          | 0                    | 0 |                     |  | Tstm Wind/Hail          |
| <b>Yamhill County</b>  |         |                            |                           |                          |                      |   |                     |  |                         |
| Newberg  | 30      | 1430PST<br>1600PST         |                           |                          | 0                    | 0 |                     |  | Tstm Wind/Hail          |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## OREGON, Northwest

A thunderstorm moved through Marion and Yamhill counties, depositing nearly 3 inches of hail on an apartment roof in Newburg, forcing the evacuation of its 19 residents. Three-quarter inch hail was reported at Mt Angel as it passed over the area.

## OREGON, Southeast

NONE REPORTED.

## OREGON, Southwest

### **Coos County**

|            |    |         |  |  |   |   |  |  |                  |
|------------|----|---------|--|--|---|---|--|--|------------------|
| Countywide | 01 | 0000PST |  |  | 0 | 0 |  |  | Wild/Forest Fire |
|            | 02 | 0635PST |  |  |   |   |  |  |                  |

### **Curry County**

|            |    |         |  |  |   |   |  |  |                  |
|------------|----|---------|--|--|---|---|--|--|------------------|
| Countywide | 01 | 0000PST |  |  | 0 | 0 |  |  | Wild/Forest Fire |
|            | 02 | 0635PST |  |  |   |   |  |  |                  |

### **Jackson County**

|            |    |         |  |  |   |   |  |  |                  |
|------------|----|---------|--|--|---|---|--|--|------------------|
| Countywide | 01 | 0000PST |  |  | 0 | 0 |  |  | Wild/Forest Fire |
|            | 02 | 0635PST |  |  |   |   |  |  |                  |

### **Josephine County**

|            |    |         |  |  |   |   |  |  |                  |
|------------|----|---------|--|--|---|---|--|--|------------------|
| Countywide | 01 | 0000PST |  |  | 0 | 0 |  |  | Wild/Forest Fire |
|            | 02 | 0635PST |  |  |   |   |  |  |                  |

A Red Flag Warning was issued at 1500 PDT on 08/31 for fire weather zones 618/619/620 for forecast poor relative humidity recoveries. Major wildfires were ongoing in the warning area. The warning was not really countywide for Coos (extreme southern portion only) or Jackson (western portion only) counties...but it did include all of Curry county and all but the southern portion of Josephine county. This warning verified both nights at the Red Mound RAWS, a critical station near the fires in Zone 618, and at the Quail Prairie RAWS (zone 619) on the first night, but not at other RAWS in the remaining zones. Still, given the critical situation, this warning was likely warranted, as field conditions were at historically dry levels. The warning was cancelled at 0635 PDT on 09/02.

## **ORZ029>031**

### **Klamath Basin - Northern & Eastern Klamath County & Western Lake County - Central & Eastern Lake County**

|  |    |         |  |  |   |   |  |  |              |
|--|----|---------|--|--|---|---|--|--|--------------|
|  | 05 | 0518PST |  |  | 0 | 0 |  |  | Extreme Cold |
|  | 06 | 0800PST |  |  |   |   |  |  |              |

A Frost Warning was issued for the above zones effective at the above times. Reported low temperatures ranged from 25 to 37, so it appears that this warning verified...with some areas meeting the criteria for a freeze warning.

## **ORZ029>031**

### **Klamath Basin - Northern & Eastern Klamath County & Western Lake County - Central & Eastern Lake County**

|  |    |         |  |  |   |   |  |  |              |
|--|----|---------|--|--|---|---|--|--|--------------|
|  | 06 | 0445PST |  |  | 0 | 0 |  |  | Extreme Cold |
|  | 07 | 0800PST |  |  |   |   |  |  |              |

A Frost Warning was issued for the above zones effective at the above times. Reported low temperatures ranged from 22 to 36, so it appears that this warning verified...with some areas meeting the criteria for a freeze warning.

## **Jackson County**

|            |    |         |  |  |   |   |  |  |                |
|------------|----|---------|--|--|---|---|--|--|----------------|
| Shady Cove | 06 | 1515PST |  |  | 0 | 0 |  |  | Tstm Wind/Hail |
|------------|----|---------|--|--|---|---|--|--|----------------|

See below.

An NWS employee on her way home from work reported golf ball size hail associated with a thunderstorm just south of Shady Cove. Based on this report, a Severe Thunderstorm Warning was issued for Northern Jackson County at 1517 PST on 09/06/02 and expired at 1545 PST on 09/06/02.

## **ORZ029>031**

### **Klamath Basin - Northern & Eastern Klamath County & Western Lake County - Central & Eastern Lake County**

|  |    |         |  |  |   |   |  |  |              |
|--|----|---------|--|--|---|---|--|--|--------------|
|  | 07 | 0430PST |  |  | 0 | 0 |  |  | Extreme Cold |
|  | 08 | 0800PST |  |  |   |   |  |  |              |

See below.

A Frost Warning was issued for the above zones effective at the above times. Reported low temperatures ranged from 19 to 31, so it appears that this warning verified...with many areas meeting the criteria for a freeze warning. In fact, a Freeze Warning was likely the better product in this situation.

## **ORZ029>031**

### **Klamath Basin - Northern & Eastern Klamath County & Western Lake County - Central & Eastern Lake County**

|  |    |         |  |  |   |   |  |  |              |
|--|----|---------|--|--|---|---|--|--|--------------|
|  | 08 | 0430PST |  |  | 0 | 0 |  |  | Extreme Cold |
|  | 09 | 0800PST |  |  |   |   |  |  |              |

See below.

A Frost Warning was issued for the above zones effective at the above times. Reported low temperatures ranged from 26 to 36, so it appears that this warning verified...with some areas meeting the criteria for a freeze warning. In fact, a Freeze Warning may have been more appropriate for this event.

# Storm Data and Unusual Weather Phenomena

September 2002

|                          |  | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |          | Estimated<br>Damage |       | September 2002          |
|--------------------------|--|----------------------------|---------------------------|--------------------------|----------------------|----------|---------------------|-------|-------------------------|
| Location                 | Date   |                            |                           |                          | Killed               | Injured  | Property            | Crops | Character of Storm      |
| <b>OREGON, Southwest</b> |  |                            |                           |                          |                      |          |                     |       |                         |
| <b>ORZ029&gt;031</b>     | <b>Klamath Basin - Northern &amp; Eastern Klamath County &amp; Western Lake County - Central &amp; Eastern Lake County</b>   |                            |                           |                          |                      |          |                     |       |                         |
|                          | <b>09</b>  | <b>1330PST</b>             |                           |                          | <b>0</b>             | <b>0</b> |                     |       | <b>Extreme Cold</b>     |
|                          | <b>10</b>  | <b>0800PST</b>             |                           |                          |                      |          |                     |       |                         |
|                          | See below.   |                            |                           |                          |                      |          |                     |       |                         |
|                          | A Frost Warning was issued for the above zones effective at the above times. Reported low temperatures ranged from 29 to 44, so it appears that this warning verified...with isolated areas meeting the criteria for a freeze warning.   |                            |                           |                          |                      |          |                     |       |                         |
| <b>ORZ029&gt;031</b>     | <b>Klamath Basin - Northern &amp; Eastern Klamath County &amp; Western Lake County - Central &amp; Eastern Lake County</b>   |                            |                           |                          |                      |          |                     |       |                         |
|                          | <b>10</b>  | <b>1426PST</b>             |                           |                          | <b>0</b>             | <b>0</b> |                     |       | <b>Extreme Cold</b>     |
|                          | <b>11</b>  | <b>0800PST</b>             |                           |                          |                      |          |                     |       |                         |
|                          | See below.   |                            |                           |                          |                      |          |                     |       |                         |
|                          | A Frost Warning was issued for the above zones effective at the above times. Reported low temperatures ranged from 35 to 40, so it appears that this warning verified.   |                            |                           |                          |                      |          |                     |       |                         |
| <b>Klamath County</b>    |  |                            |                           |                          |                      |          |                     |       |                         |
| <b>Countywide</b>        | <b>13</b>  | <b>1500PST</b>             |                           |                          | <b>0</b>             | <b>0</b> |                     |       | <b>Wild/Forest Fire</b> |
|                          | <b>15</b>  | <b>0617PST</b>             |                           |                          |                      |          |                     |       |                         |
|                          | See below.   |                            |                           |                          |                      |          |                     |       |                         |
| <b>Lake County</b>       |  |                            |                           |                          |                      |          |                     |       |                         |
| <b>Countywide</b>        | <b>13</b>  | <b>1500PST</b>             |                           |                          | <b>0</b>             | <b>0</b> |                     |       | <b>Wild/Forest Fire</b> |
|                          | <b>15</b>  | <b>0617PST</b>             |                           |                          |                      |          |                     |       |                         |
|                          | See below.   |                            |                           |                          |                      |          |                     |       |                         |
|                          | A Red Flag Warning was issued for Fire Weather zones 624/625 effective at the above times for expected gusty winds combined with low relative humidities. South winds 15-25 were reported with minimum relative humidities of 5-15% and ridgetop recoveries in the 20-30% range. So it appears this warning verified.  |                            |                           |                          |                      |          |                     |       |                         |
| <b>Coos County</b>       |  |                            |                           |                          |                      |          |                     |       |                         |
| <b>Countywide</b>        | <b>18</b>  | <b>1520PST</b>             |                           |                          | <b>0</b>             | <b>0</b> |                     |       | <b>Wild/Forest Fire</b> |
|                          | <b>21</b>  | <b>1315PST</b>             |                           |                          |                      |          |                     |       |                         |
|                          | See below.   |                            |                           |                          |                      |          |                     |       |                         |
| <b>Curry County</b>      |  |                            |                           |                          |                      |          |                     |       |                         |
| <b>Countywide</b>        | <b>18</b>  | <b>1520PST</b>             |                           |                          | <b>0</b>             | <b>0</b> |                     |       | <b>Wild/Forest Fire</b> |
|                          | <b>21</b>  | <b>1315PST</b>             |                           |                          |                      |          |                     |       |                         |
|                          | See below.   |                            |                           |                          |                      |          |                     |       |                         |
| <b>Josephine County</b>  |  |                            |                           |                          |                      |          |                     |       |                         |
| <b>Countywide</b>        | <b>18</b>  | <b>1520PST</b>             |                           |                          | <b>0</b>             | <b>0</b> |                     |       | <b>Wild/Forest Fire</b> |
|                          | <b>21</b>  | <b>1315PST</b>             |                           |                          |                      |          |                     |       |                         |
|                          | See below.   |                            |                           |                          |                      |          |                     |       |                         |
|                          | A Red Flag warning effective at the above times was issued for fire weather zones 618/619 for gusty ridgetop winds and poor relative humidity recoveries during an offshore wind event. The warning area included all but the southeast portion of Curry county as well as small parts of Coos (extreme south) and Josephine (extreme west) counties. The available data indicate that this warning verified at the Red Mound RAWS on the nights of 09/18-19 and 09/20-21,and barely missed verifying the night of 09/19-20. |                            |                           |                          |                      |          |                     |       |                         |
| <b>Coos County</b>       |  |                            |                           |                          |                      |          |                     |       |                         |
| <b>Countywide</b>        | <b>23</b>  | <b>0430PST</b>             |                           |                          | <b>0</b>             | <b>0</b> |                     |       | <b>Wild/Forest Fire</b> |
|                          | <b>26</b>  | <b>1155PST</b>             |                           |                          |                      |          |                     |       |                         |
|                          | See below.   |                            |                           |                          |                      |          |                     |       |                         |
| <b>Curry County</b>      |  |                            |                           |                          |                      |          |                     |       |                         |
| <b>Countywide</b>        | <b>23</b>  | <b>0430PST</b>             |                           |                          | <b>0</b>             | <b>0</b> |                     |       | <b>Wild/Forest Fire</b> |
|                          | <b>26</b>  | <b>1155PST</b>             |                           |                          |                      |          |                     |       |                         |
|                          | See below.   |                            |                           |                          |                      |          |                     |       |                         |
| <b>Josephine County</b>  |  |                            |                           |                          |                      |          |                     |       |                         |
| <b>Countywide</b>        | <b>23</b>  | <b>0430PST</b>             |                           |                          | <b>0</b>             | <b>0</b> |                     |       | <b>Wild/Forest Fire</b> |
|                          | <b>26</b>  | <b>1155PST</b>             |                           |                          |                      |          |                     |       |                         |
|                          | See below.   |                            |                           |                          |                      |          |                     |       |                         |
| <b>Jackson County</b>    |  |                            |                           |                          |                      |          |                     |       |                         |
| <b>Countywide</b>        | <b>24</b>  | <b>0615PST</b>             |                           |                          | <b>0</b>             | <b>0</b> |                     |       | <b>Wild/Forest Fire</b> |
|                          | <b>25</b>  | <b>0540PST</b>             |                           |                          |                      |          |                     |       |                         |
|                          | See below.   |                            |                           |                          |                      |          |                     |       |                         |
|                          | A Red Flag warning effective 09/23-26/02 was issued for fire weather zones 618/619 for gusty ridgetop winds and poor relative humidity recoveries during an offshore wind event. The warning area included all but the southeast portion of Curry county as well as small parts of Coos (extreme south) and Josephine (extreme west) counties. The warning was extended to zone 620 from   |                            |                           |                          |                      |          |                     |       |                         |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## OREGON, Southwest

09/24-25/02. This zone included almost all of Josephine county and far west Jackson county.

Available data indicate that this warning verified at the Red Mound RAWS (zone 618) each night of the warning period. The Quail Prairie RAWS (zone 619) had sufficiently low RH values, but the winds did not meet warning criteria by a slim margin. The Onion Mountain RAWS (zone 620) verified a Red Flag Warning the one night it was in effect there and barely missed verifying the following night. Overall, it appears this event was handled well.

## PACIFIC

NOT RECEIVED.

## PENNSYLVANIA, Central

### Warren County

|  |    |         |  |  |   |   |  |  |                         |
|--|----|---------|--|--|---|---|--|--|-------------------------|
| Warren                                       | 03 | 1448EST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G50) |
| Trees and power lines were down near Warren. |    |         |  |  |   |   |  |  |                         |

### Mckean County

|   |    |         |  |  |   |   |  |  |                         |
|---|----|---------|--|--|---|---|--|--|-------------------------|
| Kane  | 03 | 1536EST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G50) |
| Trees and power lines were reported down near Kane. |    |         |  |  |   |   |  |  |                         |

### Dauphin County

|   |    |         |  |  |   |   |  |  |                         |
|---|----|---------|--|--|---|---|--|--|-------------------------|
| Hershey   | 27 | 1900EST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G50) |
| Trees were reported down on power lines in Hershey. |    |         |  |  |   |   |  |  |                         |

### Dauphin County

|   |    |         |  |  |   |   |  |  |                         |
|---|----|---------|--|--|---|---|--|--|-------------------------|
| Middletown                                | 27 | 1900EST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G50) |
| Large tree limbs were down in Middletown. |    |         |  |  |   |   |  |  |                         |

### Adams County

|  |    |         |  |  |   |   |  |  |                         |
|--|----|---------|--|--|---|---|--|--|-------------------------|
| Mc Sherrystown   | 27 | 1900EST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G50) |
| Large tree limbs were reported down on power lines in McSherrystown. |    |         |  |  |   |   |  |  |                         |

### Lebanon County

|                             |    |         |  |  |   |   |  |  |                         |
|-----------------------------|----|---------|--|--|---|---|--|--|-------------------------|
| Lebanon                     | 27 | 1910EST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G50) |
| Trees were down in Lebanon. |    |         |  |  |   |   |  |  |                         |

### York County

|  |    |         |  |  |   |   |  |  |                         |
|--|----|---------|--|--|---|---|--|--|-------------------------|
| 9 E Hanover  | 27 | 1910EST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G50) |
| Trees were down in Codorus, 9 miles east of Hanover. |    |         |  |  |   |   |  |  |                         |

### Lancaster County

|                                   |    |         |  |  |   |   |  |  |                         |
|-----------------------------------|----|---------|--|--|---|---|--|--|-------------------------|
| 5 E Intercourse                   | 27 | 1910EST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G50) |
| Trees were down in Spring Garden. |    |         |  |  |   |   |  |  |                         |

## PENNSYLVANIA, East

### PAZ060>062-067>071 Berks - Lehigh - Northampton - Chester - Montgomery - Bucks - Delaware - Philadelphia

|    |         |  |  |  |   |   |   |  |         |
|----|---------|--|--|--|---|---|---|--|---------|
| 01 | 0000EST |  |  |  | 0 | 0 | 0 |  | Drought |
| 30 | 2359EST |  |  |  |   |   |   |  |         |

Eastern Pennsylvania entered September with drought conditions intensifying. On September 5th Governor Mark Schweiker added Bucks, Montgomery and Philadelphia Counties to the drought emergency list. These counties joined most of Eastern Pennsylvania under this status with mandatory watering restrictions in place. Residents were required to conserve water by 15 percent and could face penalties for violating regulations. Only Carbon and Monroe Counties were in drought watch status. The Delaware River Basin Commission, which oversees water supply throughout the Delaware River Basin declared a "drought" on December 3, 2001 when the supply of water in the New York City reservoir system dropped below a designated level for early December. The commission declared a drought emergency on December 18, 2001. Both triggered additional reductions in the amount of water released from the reservoirs into the Delaware River and the amount diverted out of the Delaware River Basin to New York City and New Jersey. Diversions to New York City dropped from 800 million gallons a day to 520 million gallons a day. The emergency declaration gave the commission the power to restrict the amount of water suppliers could draw from the basin. It gave the commission the authority to take water from municipal reservoirs to maintain river levels. It could also call for water releases from federal, state and privately owned reservoirs. Water from Lake Nockamixon, the F.E. Walter Reservoir and Lake Wallenpaupack could be used to maintain river levels. Releases from the F.E. Walter Dam were reduced to one-third of normal to save water. They were last used for this purpose in the 1960s. The releases help protect the riverbank and aquatic life and also prevents salt water from flowing up the Delaware River. Salt water intrusion causes corrosion problems for industries and increases water treatment costs for municipalities that depend on the river for their water supply. Maintaining river levels are also important for groundwater reserves that are recharged by the river itself. Due to the dry summer, the salt front went from mile marker 85 north to mile marker 89, ten miles farther upstream than is normal for September. The emergency declaration also gives the commission the power to request that utilities and other companies that use more than one million gallons of water a day to prepare contingency plans to use less water and submit the plans to the commission.

September saw the return of normal to wetter than normal precipitation across Eastern Pennsylvania. This came too late to help

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## PENNSYLVANIA, East

farmers throughout the state. It was estimated that the drought will cost farmers about 300 million dollars across the state. The projected corn harvest should be 30 percent below levels of last year and soybeans were expected to be down about 25 percent. Dairy farmers were pinched on both sides. Milk prices were depressed and feed prices were rising because of the drought. Fifty-four of the sixty-seven counties in the state have filed for federal agricultural disaster relief. In urban and suburban locations lawn maintenance and landscaping renovation personnel were hit the hardest. Consumers shied away from purchasing new vegetation and believed they had no way to water them.

On a county weighted average September monthly precipitation totals ranged from 3.7 inches in Delaware County to 6.3 inches in Carbon County. More precipitation fell from the south to the north. Normal monthly precipitation is around 3.9 inches. The New York City Reservoirs which feed the Delaware River decreased for 59.7 percent of capacity on September 1st to 50.4 percent of capacity on October 1st. On September 30th, the salt front on the Delaware River was about ten miles farther upstream (mile marker 89) than normal. For the month streamflow on the Delaware, Schuylkill and Lehigh Rivers was about 75 percent of normal.

September monthly precipitation was 3.46 inches at the Reading Regional Airport, 4.04 inches at the Lehigh Valley International Airport and 3.67 inches at the Philadelphia International Airport.

**PAZ054>055-060>062-067>071** **Carbon - Monroe - Berks - Lehigh - Northampton - Chester - Montgomery - Bucks - Delaware - Philadelphia**

|           |                |          |          |             |
|-----------|----------------|----------|----------|-------------|
| <b>11</b> | <b>0900EST</b> | <b>1</b> | <b>0</b> | <b>Wind</b> |
|           | <b>1800EST</b> |          |          |             |

The pressure difference between a strong high pressure system in the central part of the country and Tropical Storm Gustav located well east of the Delmarva Peninsula produced strong gusty northwest winds throughout the day on the 11th. Winds frequently gusted between 35 and 45 mph throughout the day and caused considerably more tree damage than usually occurs with winds of that speed. A male passenger was killed in an automobile on U.S. Route 202 in Buckingham Township when a large tree limb fell on the vehicle. The driver was not hurt. Two state Department of Environmental Protection workers received minor injuries when they could not stop their truck before hitting the limb. In Horsham Township (Montgomery County), a downed tree brought down three sets of wires and caused a large power outage within the township. A similar occurrence happened in Langhorne Borough (Bucks County). Downed wires caused several small brush fires throughout Eastern Pennsylvania. In Monroe County, 7,000 homes and businesses lost power. Some stores closed for the day. Several hundred people also lost phone service. PECO Energy reported about 42,000 of its customers lost power during the afternoon. The number was reduced to about 28,000 at 6 p.m. EDT. Peak wind gusts included 46 mph at the Lehigh Valley International Airport, 45 mph at the Northeast Philadelphia Airport, 44 mph at the Philadelphia International Airport and Wilkes-Barre Scranton International Airport (Luzerne County), 43 mph in Reading (Berks County), 41 mph in Doylestown (Bucks County), 39 mph in Pottstown (Montgomery County) and 36 mph in Mount Pocono. Most of the peak wind gusts occurred during the early afternoon. This was the first widespread wind gusts of these speeds since May 14th. It was suspected tree damage occurred because its been four months since similar gusts happened and because the gusty winds persisted for an extended part of the day. M?VE

## PENNSYLVANIA, Northeast

### Luzerne County

|               |           |                |          |          |           |                          |
|---------------|-----------|----------------|----------|----------|-----------|--------------------------|
| <b>Lehman</b> | <b>12</b> | <b>1615EST</b> | <b>0</b> | <b>2</b> | <b>5K</b> | <b>Thunderstorm Wind</b> |
|---------------|-----------|----------------|----------|----------|-----------|--------------------------|

A tree fell on a pickup truck on Old Route 115 in the town of Lehman. The tree crushed the cab of the truck injuring the two occupants.

## PENNSYLVANIA, Northwest

### Erie County

|                   |           |                |          |          |             |                    |
|-------------------|-----------|----------------|----------|----------|-------------|--------------------|
| <b>Countywide</b> | <b>15</b> | <b>1330EST</b> | <b>0</b> | <b>0</b> | <b>100K</b> | <b>Flash Flood</b> |
|                   |           | <b>1500EST</b> |          |          |             |                    |

Thunderstorms dumped up to 3.25 inches of rain in less than two hours causing widespread flooding across Erie County. Water up to three feet in depth was reported on some roads with several additional roads washed out.

## PENNSYLVANIA, West

### Mercer County

|                 |           |                |          |          |           |                          |
|-----------------|-----------|----------------|----------|----------|-----------|--------------------------|
| <b>Fredonia</b> | <b>03</b> | <b>1545EST</b> | <b>0</b> | <b>0</b> | <b>2K</b> | <b>Thunderstorm Wind</b> |
|-----------------|-----------|----------------|----------|----------|-----------|--------------------------|

Thunderstorm winds downed a few large trees and power lines.

### Lawrence County

|                         |           |                |          |          |            |                          |
|-------------------------|-----------|----------------|----------|----------|------------|--------------------------|
| <b>3 E Ellwood City</b> | <b>03</b> | <b>1736EST</b> | <b>0</b> | <b>0</b> | <b>10K</b> | <b>Thunderstorm Wind</b> |
|-------------------------|-----------|----------------|----------|----------|------------|--------------------------|

Thunderstorm winds downed numerous trees along State Route 288.

### Washington County

|                   |           |                |          |          |  |                    |
|-------------------|-----------|----------------|----------|----------|--|--------------------|
| <b>Washington</b> | <b>18</b> | <b>2310EST</b> | <b>0</b> | <b>0</b> |  | <b>Hail (0.75)</b> |
|-------------------|-----------|----------------|----------|----------|--|--------------------|

## PUERTO RICO

### Eastern Interior

|                          |           |                |          |          |            |                    |
|--------------------------|-----------|----------------|----------|----------|------------|--------------------|
| <b>Southwest Portion</b> | <b>15</b> | <b>1100AST</b> | <b>0</b> | <b>0</b> | <b>20K</b> | <b>Flash Flood</b> |
|                          |           | <b>1500AST</b> |          |          |            |                    |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002  |      |                            |                           |                          |                      |         |                     |       |                      |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|----------------------|
| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm   |
|   |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                      |
| PUERTO RICO   |      |                            |                           |                          |                      |         |                     |       |                      |
| Mayaguez And Vicinity   |      |                            |                           |                          |                      |         |                     |       |                      |
| Rincon  | 15   | 1100AST<br>1500AST         |                           |                          | 0                    | 0       | 10K                 |       | Flash Flood          |
| Ponce And Vicinity  |      |                            |                           |                          |                      |         |                     |       |                      |
| Yauco   | 15   | 1100AST<br>1500AST         |                           |                          | 0                    | 0       | 10K                 |       | Flash Flood          |
| A tropical depression well to the south of Puerto Rico caused heavy rains and strong gusty winds across the island. The areas most affected were Cayey and Cidra where various homes were affected by the waters and landslides. In addition, in Yauco, a landslide collapsed a fence falling over power lines and in Rincon strong winds affected power and phone lines. |      |                            |                           |                          |                      |         |                     |       |                      |
| Northeast   |      |                            |                           |                          |                      |         |                     |       |                      |
| East Portion  | 16   | 0100AST<br>0400AST         |                           |                          | 0                    | 0       |                     |       | Urban/Sml Stream Fld |
| Vieques   |      |                            |                           |                          |                      |         |                     |       |                      |
| Countywide  | 16   | 0100AST<br>0400AST         |                           |                          | 0                    | 0       |                     |       | Urban/Sml Stream Fld |
| A tropical wave caused heavy rains and strong gusty winds over parts of eastern Puerto Rico and the island of Vieques. Several roads were flooded in Fajardo and Vieques.   |      |                            |                           |                          |                      |         |                     |       |                      |
| Mayaguez And Vicinity   |      |                            |                           |                          |                      |         |                     |       |                      |
| Mayaguez  | 18   | 1200AST<br>1400AST         |                           |                          | 0                    | 0       |                     |       | Urban/Sml Stream Fld |
| Heavy rains caused several roads to flood in downtown Mayaguez and urban flooding in Guanajibo sector.  |      |                            |                           |                          |                      |         |                     |       |                      |
| Western Interior  |      |                            |                           |                          |                      |         |                     |       |                      |
| East Portion  | 18   | 1400AST<br>1600AST         |                           |                          | 0                    | 0       |                     |       | Heavy Rain           |
| Strong thunderstorms developed during the afternoon hours over the western sections of Puerto Rico. The municipalities most affected with heavy rain were Lares and Utuado where various landslides were observed blocking the roads.   |      |                            |                           |                          |                      |         |                     |       |                      |
| San Juan And Vicinity   |      |                            |                           |                          |                      |         |                     |       |                      |
| San Juan  | 19   | 1500AST<br>1515AST         |                           |                          | 0                    | 0       |                     |       | Funnel Cloud         |
| A funnel cloud was observed in the vicinity of Rio Piedras sector.  |      |                            |                           |                          |                      |         |                     |       |                      |
| Northeast   |      |                            |                           |                          |                      |         |                     |       |                      |
| East Portion  | 20   | 1400AST<br>1600AST         |                           |                          | 0                    | 0       |                     |       | Tstm Wind/Hail       |
| San Juan And Vicinity   |      |                            |                           |                          |                      |         |                     |       |                      |
| Central Portion   | 20   | 1400AST<br>1600AST         |                           |                          | 0                    | 0       |                     |       | Tstm Wind/Hail       |
| Strong thunderstorms occurred during the afternoon across the northern sections of Puerto Rico. The areas most affected were San Juan, Trujillo Alto and Vega Alta where small hail was observed. Strong gusty winds knocked down tree branches in Rio Piedras sector in San Juan.  |      |                            |                           |                          |                      |         |                     |       |                      |
| San Juan And Vicinity   |      |                            |                           |                          |                      |         |                     |       |                      |
| Countywide  | 24   | 1300AST<br>1500AST         |                           |                          | 0                    | 0       |                     |       | Urban/Sml Stream Fld |
| Heavy rains occurred in the San Juan metropolitan area flooding main avenues. This rainfall caused massive traffic jams.  |      |                            |                           |                          |                      |         |                     |       |                      |
| San Juan And Vicinity   |      |                            |                           |                          |                      |         |                     |       |                      |
| Carolina  | 24   | 1500AST<br>1510AST         |                           |                          | 0                    | 0       | 10K                 |       | Lightning            |
| Lightning struck a power pole, knocking down power lines at the intersection of roads 853 and 859.  |      |                            |                           |                          |                      |         |                     |       |                      |
| Northwest   |      |                            |                           |                          |                      |         |                     |       |                      |
| Aguadilla   | 26   | 1315AST<br>1330AST         |                           |                          | 0                    | 0       |                     |       | Funnel Cloud         |
| San Juan And Vicinity   |      |                            |                           |                          |                      |         |                     |       |                      |
| Catano  | 28   | 1600AST<br>1800AST         |                           |                          | 0                    | 0       |                     |       | Urban/Sml Stream Fld |
| Main roads in Levittown sector flooded due to heavy rains.  |      |                            |                           |                          |                      |         |                     |       |                      |
| PRZ001>007-012>013 San Juan And Vicinity - Northeast - Southeast - Eastern Interior - North Central - Central Interior - Ponce And Vicinity - Culebra - Vieques   |      |                            |                           |                          |                      |         |                     |       |                      |
|   | 30   | 1000AST<br>2000AST         |                           |                          | 0                    | 0       |                     |       | Volcanic Ash         |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## PUERTO RICO

A volcanic eruption occurred over the island of Montserrat in the Lesser Antilles, southeast of the local region. Southeast winds carried a thin volcanic ash cloud toward the eastern sections of Puerto Rico during the morning hours. This cloud moved northwest away from the area in the late afternoon and dissipated.

## RHODE ISLAND

**RIZ001>003**

### **Northwest Providence - Southeast Providence - Western Kent**

|           |                |          |          |            |                  |
|-----------|----------------|----------|----------|------------|------------------|
| <b>11</b> | <b>1400EST</b> | <b>0</b> | <b>0</b> | <b>55K</b> | <b>High Wind</b> |
| <b>16</b> | <b>1600EST</b> |          |          |            |                  |

High winds buffeted parts of northern and central Rhode Island, as a result of Hurricane Gustav passing several hundred miles southeast of New England and high pressure over southern Canada. Although wind speeds were measured as high as 50 mph, there were numerous reports of downed trees and branches which took down power lines and disrupted service to about eighteen thousand electric customers. The damage was likely due to weakened root systems, as a result of the longer term drought being felt over much of the northeast, in addition to the fact that most trees still had their leaves.

Downed power lines lit a brush fire along Route 104 in Smithfield and trees blocked a road in Warwick. In Providence, a tree fell on a vehicle and branches fell onto a house. About four thousand electric customers lost power in Johnston and Glocester. Falling trees caused damage to a car and two homes in Johnston. Many trees were reported downed by the high winds in Coventry near the Scituate line.

### **Bristol County**

|                |           |                |          |          |                   |
|----------------|-----------|----------------|----------|----------|-------------------|
| <b>Bristol</b> | <b>15</b> | <b>1700EST</b> | <b>0</b> | <b>0</b> | <b>Heavy Rain</b> |
|                | <b>16</b> | <b>0800EST</b> |          |          |                   |

### **Providence County**

|                                   |           |                |          |          |                   |
|-----------------------------------|-----------|----------------|----------|----------|-------------------|
| <b>Johnston to<br/>Providence</b> | <b>15</b> | <b>1700EST</b> | <b>0</b> | <b>0</b> | <b>Heavy Rain</b> |
|                                   | <b>16</b> | <b>0800EST</b> |          |          |                   |

Bands of showers and isolated thunderstorms brought heavy rain to parts of Rhode Island. The heavy rain was attributed to the remnants of Tropical Storm Hanna interacting with an eastward moving cold front. Rainfall totals of 2 to 3 inches were common throughout Providence and Bristol Counties.

Some specific totals include 3.05 inches in Cranston, 2.76 inches in Johnston, 2.50 inches in downtown Providence, and 2.15 inches in Bristol. No flooding was reported, aside from minor flooding due to poor drainage.

### **Newport County**

|                                |           |                |          |          |                   |
|--------------------------------|-----------|----------------|----------|----------|-------------------|
| <b>Tiverton to<br/>Newport</b> | <b>22</b> | <b>2000EST</b> | <b>0</b> | <b>0</b> | <b>Heavy Rain</b> |
|                                | <b>23</b> | <b>1100EST</b> |          |          |                   |

### **Providence County**

|                   |           |                |          |          |                   |
|-------------------|-----------|----------------|----------|----------|-------------------|
| <b>Providence</b> | <b>22</b> | <b>2000EST</b> | <b>0</b> | <b>0</b> | <b>Heavy Rain</b> |
|                   | <b>23</b> | <b>1100EST</b> |          |          |                   |

Tropical moisture associated with a slow moving cold front brought heavy rain to parts of Rhode Island. The highest storm totals, on the order of 2 to 3 inches, were reported in Newport County and into adjacent portions of southeast Massachusetts. No flooding was reported as a result of the rainfall, aside from the usual minor flooding in poor drainage areas.

Some specific totals include 3.40 inches in Tiverton, 2.13 inches in downtown Providence, and 2.10 inches in Newport.

## SOUTH CAROLINA, Central

### **Orangeburg County**

|                   |           |                |          |          |          |                                |
|-------------------|-----------|----------------|----------|----------|----------|--------------------------------|
| <b>Orangeburg</b> | <b>14</b> | <b>1530EST</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>Thunderstorm Wind (G60)</b> |
|-------------------|-----------|----------------|----------|----------|----------|--------------------------------|

EOC reported numerous trees down in the vicinity of Orangeburg.

### **Saluda County**

|                     |           |                |          |          |          |                                |
|---------------------|-----------|----------------|----------|----------|----------|--------------------------------|
| <b>7 NNE Saluda</b> | <b>14</b> | <b>1622EST</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>Thunderstorm Wind (G50)</b> |
|---------------------|-----------|----------------|----------|----------|----------|--------------------------------|

Highway dept. reported some trees down on hwy 121.

### **Aiken County**

|                               |           |                |          |          |          |                                |
|-------------------------------|-----------|----------------|----------|----------|----------|--------------------------------|
| <b>Aiken to<br/>3 N Aiken</b> | <b>14</b> | <b>1637EST</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>Thunderstorm Wind (G50)</b> |
|                               |           | <b>1647EST</b> |          |          |          |                                |

Emergency manager reported large branches down on hwy 19 and US 1.

## SOUTH CAROLINA, North Coastal

### **Florence County**

|                 |           |                |          |          |                    |
|-----------------|-----------|----------------|----------|----------|--------------------|
| <b>Florence</b> | <b>07</b> | <b>1820EST</b> | <b>0</b> | <b>0</b> | <b>Hail (0.75)</b> |
|-----------------|-----------|----------------|----------|----------|--------------------|

Dime size hail reported by 911.

### **Marion County**

|                |           |                |          |          |                             |
|----------------|-----------|----------------|----------|----------|-----------------------------|
| <b>Mullins</b> | <b>14</b> | <b>1042EST</b> | <b>0</b> | <b>0</b> | <b>Urban/Sml Stream Fld</b> |
|                |           | <b>1200EST</b> |          |          |                             |

Tropical Storm Hanna made landfall along the gulf coast, and the remnants moved into the Carolinas. Areas in South Carolina received the most rainfall, with many cities reporting over three inches of precipitation. The 911 center reported flooding on Hwy 41.

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002                          |      |  |                           |                          |                      |   |                     |  |                         |
|---|------|--|---------------------------|--------------------------|----------------------|---|---------------------|--|-------------------------|
| Location                                | Date | Time<br>Local/<br>Standard   | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |  | Character of Storm      |
|   |      |  |                           |                          |                      |   |                     |  |                         |
| <b><u>SOUTH CAROLINA, Northwest</u></b> |      |  |                           |                          |                      |   |                     |  |                         |
| <b>Anderson County</b>                  |      |  |                           |                          |                      |   |                     |  |                         |
| Pendleton                               | 14   | 1635EST  |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50) |
|   |      | Some trees were blown down.  |                           |                          |                      |   |                     |  |                         |
| <b>Anderson County</b>                  |      |  |                           |                          |                      |   |                     |  |                         |
| Anderson                                | 14   | 1635EST  |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50) |
|   |      | Some trees were blown down.  |                           |                          |                      |   |                     |  |                         |
| <b>Oconee County</b>                    |      |  |                           |                          |                      |   |                     |  |                         |
| Westminster                             | 14   | 1642EST  |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50) |
|   |      | Some trees were blown down.  |                           |                          |                      |   |                     |  |                         |
| <b>Greenwood County</b>                 |      |  |                           |                          |                      |   |                     |  |                         |
| Greenwood                               | 14   | 1645EST  |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50) |
|   |      | Some trees and power lines were blown down in the south part of town.  |                           |                          |                      |   |                     |  |                         |
| <b>Laurens County</b>                   |      |  |                           |                          |                      |   |                     |  |                         |
| 5 W Laurens                             | 14   | 1727EST  |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50) |
|   |      | Some trees were blown down along Indian Mound Rd.  |                           |                          |                      |   |                     |  |                         |
| <b>Spartanburg County</b>               |      |  |                           |                          |                      |   |                     |  |                         |
| 5 SW Spartanburg                        | 14   | 1810EST  |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G50) |
|   |      | A blown down tree fell on a mobile home.   |                           |                          |                      |   |                     |  |                         |
| <b>SCZ004</b>                           |      |  |                           |                          |                      |   |                     |  |                         |
| to                                      | 15   | 1115EST  |                           |                          | 0                    | 0 |                     |  | Flood                   |
| Seneca                                  |      | 1500EST  |                           |                          |                      |   |                     |  |                         |
|   |      | Several roads and bridges were flooded from Walhalla to Seneca.  |                           |                          |                      |   |                     |  |                         |
| <b>SCZ010</b>                           |      |  |                           |                          |                      |   |                     |  |                         |
| to                                      | 15   | 1345EST  |                           |                          | 0                    | 0 |                     |  | Flood                   |
| Anderson                                |      | 1700EST  |                           |                          |                      |   |                     |  |                         |
|   |      | Flooding of roads and streams was reported across the city of Anderson, and along the Highway 28 bypass south of town. In the northern part of the county, a pond was overflown, and 4 to 6 inches of water covered some roads.  |                           |                          |                      |   |                     |  |                         |
| <b>Greenville County</b>                |      |  |                           |                          |                      |   |                     |  |                         |
| Piedmont to<br>Greenville               | 15   | 1345EST<br>1600EST   |                           |                          | 0                    | 0 |                     |  | Flood                   |
|   |      | Flooding began in the western part of the county, where a car was trapped in high water along Highway 20 near Piedmont. In Greenville, Laurens Rd and Cleveland St were closed due to high water. Some homes were also flooded in these areas. Sinkholes developed near Laurens Rd and Industrial Dr.  |                           |                          |                      |   |                     |  |                         |
| <b>Greenville County</b>                |      |  |                           |                          |                      |   |                     |  |                         |
| Mauldin to<br>7 E Simpsonville          | 15   | 1430EST<br>2300EST   |                           |                          | 0                    | 0 |                     |  | Flood                   |
|   |      | Flooding of several roads and some subdivisions occurred in Mauldin after 4 to 8 inches of rain fell in 4 hours. Flooding became severe by early evening, as numerous homes and businesses were flooded along Gilder Creek and its tributaries. By late evening, Gilder Creek was flooding homes along Vaughn Rd and East Georgia Rd. In addition, an overflowing pond flooded Scuffletown Rd near its intersection with Gresham Rd. |                           |                          |                      |   |                     |  |                         |
| <b>SCZ005</b>                           |      |  |                           |                          |                      |   |                     |  |                         |
| to                                      | 15   | 1430EST  |                           |                          | 0                    | 0 |                     |  | Flood                   |
| Easley                                  |      | 1700EST  |                           |                          |                      |   |                     |  |                         |
|   |      | Some urban flooding was reported in Easley.  |                           |                          |                      |   |                     |  |                         |
| <b>SCZ006</b>                           |      |  |                           |                          |                      |   |                     |  |                         |
| to                                      | 15   | 1445EST  |                           |                          | 0                    | 0 |                     |  | Flood                   |
| Greer                                   |      | 1700EST  |                           |                          |                      |   |                     |  |                         |
|   |      | Flooding began during the mid to late afternoon from Taylors to Greer, with Brushy Creek, the Enoree River, and Rocky Creek all flooding area roads and some bridges. Several rescues were required and some homes were flooded.   |                           |                          |                      |   |                     |  |                         |
| <b>Greenville County</b>                |      |  |                           |                          |                      |   |                     |  |                         |
| Fountain Inn to<br>3 W Simpsonville     | 15   | 1500EST<br>1700EST   |                           |                          | 0                    | 0 |                     |  | Flood                   |
|   |      | Overflowing creeks caused flooding of roads and bridges. Rescues from vehicles were required around Ashmore Bridge Rd, Neely Ferry Rd, and nearby sections. Some homes were also flooded in Simpsonville.  |                           |                          |                      |   |                     |  |                         |
| <b>Spartanburg County</b>               |      |  |                           |                          |                      |   |                     |  |                         |
| Pelham to<br>Reidville                  | 15   | 1530EST<br>1800EST   |                           |                          | 0                    | 0 |                     |  | Flood                   |
|   |      | Overflowing streams caused flooding of roads near the Enoree River.  |                           |                          |                      |   |                     |  |                         |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## SOUTH CAROLINA, Northwest

### Laurens County

5 E Fountain Inn 15 1730EST 1930EST 0 0 Flood

Some roads and small streams were flooded in the Durbin Creek area.

### SCZ013

#### Union

to 15 1830EST 2000EST 0 0 Flood

Union Some roads and small streams flooded in the city of Union. In addition, numerous trees fell as heavy rains washed away soil.

### Spartanburg County

Lyman 15 1830EST 2000EST 0 0 Flood

Water was flowing over a bridge, and 5 feet of railroad bed was washed out.

### SCZ001>003-006

#### Oconee Mountains - Pickens Mountains - Greenville Mountains - Greater Greenville

26 2100EST 0 0 Gusty Winds

27 1400EST

Strong winds developed over the mountains and foothills of South Carolina, as the remnants of tropical storm Isidore passed across the Tennessee and Ohio valleys. The combination of wind and wet soil from heavy rainfall resulted in some fallen trees and power lines in scattered locations.

## SOUTH CAROLINA, South Coastal

### SCZ040-042>045-047>050 Allendale - Hampton - Northern Colleton - Dorchester - Berkeley - Jasper - Beaufort - Southern Colleton - Charleston

01 0000EST 0 0 Drought

30 2359EST

Moderate drought conditions persisted throughout the month as several tropical systems impacted the region producing copious rainfall.

### Charleston County

3 NE Charleston Afb to 28 1720EST 0.3 25 0 0 Tornado (F0)

3.3 NE Charleston Afb 1723EST

Several spotters tracked a funnel cloud across North Charleston. Funnel finally dipped down briefly into some trees where the top was taken out of several trees and some limbs were downed. The brief touch down was near the intersection of U.S. 52 and Otranto Road, which is near the Charleston and Berkeley County line.

### Berkeley County

3.6 S Goose Creek to 28 1723EST 0.2 25 0 0 Tornado (F0)

3.4 SSE Goose Creek 1727EST

Spotters continued to watch funnel cloud move out of the North Charleston area and into Berkeley County. Funnel continued to take out tops of trees as it moved into Berkeley County.

## SOUTH DAKOTA, Central and North

NONE REPORTED.

## SOUTH DAKOTA, Southeast

### Lincoln County

Sioux Falls 18 0215CST 0 0 Hail (0.75)

### Minnehaha County

Sioux Falls 18 0220CST 0 0 Hail (0.75)

### Brookings County

Volga 18 0300CST 0 0 Hail (0.75)

### Minnehaha County

Sioux Falls 19 0220CST 0 0 20K Lightning

Lightning struck a house, causing an attic fire.

### Lincoln County

5 S Worthing 24 1735CST 0 0 Hail (0.75)

## SOUTH DAKOTA, West

### Ziebach County

9 W Cherry Creek 07 2057MST 0 0 0 Thunderstorm Wind (G54) <sup>M</sup>

### Pennington County

Wall to 07 2100MST 0 0 10K Thunderstorm Wind (G79) <sup>M</sup>

7 S Wall

Severe thunderstorm winds hit Wall and areas south of town. A building under construction was destroyed and several fences in town were blown down. A resident 7 miles south of town measured a 91 mph wind gust with an unknown "wind gauge".

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date    | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |  | Estimated<br>Damage | Crops | Character of Storm |
|----------|---------|----------------------------|---------------------------|--------------------------|----------------------|--|---------------------|-------|--------------------|
| Killed   | Injured | Property                   |                           |                          |                      |  |                     |       |                    |

## SOUTH DAKOTA, West

**SDZ001-031-073**

**Harding - Pennington Co Plains - Southern Meade Co Plains**

**18 0151MST  
0943MST**

**0 0 0**

**High Wind (G53) M**

Behind a cold front sustained winds increased to 35 to 45 mph across portions of northwestern South Dakota. The Rapid City airport reported a wind gust to 61 mph along with these sustained winds.

## TENNESSEE, Central

**Trousdale County**

**1 NE Hartsville**

**06 1440CST**

**0 0**

**Thunderstorm Wind (G50)**

Law enforcement reported trees and power lines were down on Halltown Rd.

**Humphreys County**

**5 E Waverly**

**06 1530CST**

**0 0**

**Thunderstorm Wind (G50)**

Law enforcement reported trees were down near Gorman on U. S. Highway 70.

**Houston County**

**5 W Tennessee Ridge**

**06 1616CST**

**0 0**

**Thunderstorm Wind (G50)**

Law enforcement reported trees were down on State Route 147 near the town of Stewart.

**Dekalb County**

**Center Hill Lake**

**18 1115CST**

**0 0**

**Hail (0.88)**

Nickel size hail reported.

**Putnam County**

**Countywide**

**20 0800CST  
0930CST**

**0 0**

**Flash Flood**

Several roads were closed due to high water.

**Rutherford County**

**Murfreesboro**

**20 1730CST**

**0 0**

**Hail (0.75)**

Spotter reported dime size hail.

**Rutherford County**

**Murfreesboro**

**20 1743CST**

**0 0**

**Hail (0.75)**

Spotter reported dime size hail.

**Putnam County**

**Cookeville**

**22 0800CST  
0930CST**

**0 0**

**Flash Flood**

About 2 inches of rain fell in an hour in Cookeville. Streets and roads were closed in the Cookeville area. A small apartment building's foundation collapsed at Buck Ave. and Cypress St. The foundation was on concrete blocks and the soil gave way. The foundation may have been over a sink hole because it left a hole big enough for a person to walk into. 3 families were forced out of their apartments. It was a 3 unit apartment building. Also, a basement wall in a house collapsed during the flooding on Maple Ave. It was a one-story old home. A family was forced to find shelter elsewhere. In addition, several people had to be rescued from their vehicles on Willow Ave. The water was almost up to the windows of vehicles. There were no injuries.

**Benton County**

**Countywide**

**26 2200CST  
27 0030CST**

**0 0**

**50K**

**Flood**

Sheriff's office said 30 roads had to be closed due to high water in the county. Roads affected were mainly between Camden and Big Sandy. A woman was trapped in her car by high water and had to be rescued by boat just north of Camden. She was not hurt. Schools were closed on Friday, Sep. 27 because of water problems on the roads. TDOT stated that a wooden bridge collapsed in the Big Sandy area on Pt. Mason Rd. It was replaced with 3 culverts. Also, a 20 foot section of road on Spring Drive near Camden had to be replaced with gravel. These rains were from the remnants of "Isidore". Some areas in Benton county received as much as 7 inches of rain from this storm.

**Stewart County**

**Countywide**

**26 2300CST  
27 0030CST**

**0 0**

**Flood**

Sheriff's department reported several roads were closed around the county due to high water.

**Montgomery County**

**Clarksville**

**27 0012CST  
0400CST**

**1 0**

**Urban/Sml Stream Fld**

A 23 year-old-male ignored high water signs and barricades and attempted to drive through standing water of 8 to 10 feet at the intersection of Ashbury Road and Shantee Terrace. The vehicle was submerged under water, and he drowned. Scuba divers had to retrieve the body from the vehicle. M23VE

## TENNESSEE, East

**Sevier County**

**Boyd's Creek**

**04 1600EST**

**0 0**

**10K**

**Thunderstorm Wind**

Several trees were reported down in the western portion of the county from Boyd's Creek Road south.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location                      | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm  |
|-------------------------------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|---|
| <b><u>TENNESSEE, East</u></b> |      |                            |                           |                          |  |                                       |   |
| <b>Sevier County</b>          |      |                            |                           |                          |  |                                       |   |
| 2 NW Walden Creek             | 04   | 1600EST                    |                           |                          | 0 0                                    | 15K                                   | Thunderstorm Wind   |
|                               |      |                            |                           |                          |  |                                       | Several trees were downed on Bluff Mountain Road. One of the trees fell on the roof of a mobile home producing damage to the structure.   |
| <b>Grainger County</b>        |      |                            |                           |                          |  |                                       |   |
| 4 SE Rutledge                 | 04   | 1715EST                    |                           |                          | 0 0                                    | 3K                                    | Thunderstorm Wind   |
|                               |      |                            |                           |                          |  |                                       | One tree was reported down on Greenlee Road off of Lakeshore Road.  |
| <b>Grainger County</b>        |      |                            |                           |                          |  |                                       |   |
| 5 E Rutledge                  | 04   | 1715EST                    |                           |                          | 0 0                                    | 6K                                    | Thunderstorm Wind   |
|                               |      |                            |                           |                          |  |                                       | A tree downed power lines on Bowen Road off of Lakeshore Road.  |
| <b>Knox County</b>            |      |                            |                           |                          |  |                                       |   |
| Solway                        | 04   | 1730EST                    |                           |                          | 0 0                                    | 5K                                    | Thunderstorm Wind   |
|                               |      |                            |                           |                          |  |                                       | A few trees were downed on Oak Ridge highway near Solway.   |
| <b>Bradley County</b>         |      |                            |                           |                          |  |                                       |   |
| 5 SW Cleveland                | 20   | 2125EST                    |                           |                          | 0 0                                    | 10K                                   | Thunderstorm Wind   |
|                               |      |                            |                           |                          |  |                                       | Several trees were reported down in the southwest portion of the county.  |
| <b>Mcminn County</b>          |      |                            |                           |                          |  |                                       |   |
| Etowah                        | 21   | 1900EST<br>2000EST         |                           |                          | 0 0                                    |                                       | Flash Flood   |
|                               |      |                            |                           |                          |  |                                       | Two inches of rain was reported during a one hour period and flooding was reported in Etowah.   |
| <b>Mcminn County</b>          |      |                            |                           |                          |  |                                       |   |
| Athens                        | 21   | 1905EST<br>2030EST         |                           |                          | 0 0                                    | 35K                                   | Flash Flood   |
|                               |      |                            |                           |                          |  |                                       | Numerous roads were flooded and impassable in and around Athens including state highway 30 and 197 as well as county roads 249 and 169. One vehicle was totally submerged in high water on highway 197 and the occupants had to be rescued. |
| <b>TNZ085</b>                 |      |                            |                           |                          |  |                                       |   |
|                               |      |                            |                           |                          |  |                                       | <b>Mcminn</b>   |
|                               | 27   | 0200EST                    |                           |                          | 0 0                                    | 30K                                   | High Wind   |
|                               |      |                            |                           |                          |  |                                       | Numerous trees were downed across the county producing some power outages.  |
| <b>TNZ069</b>                 |      |                            |                           |                          |  |                                       |   |
|                               |      |                            |                           |                          |  |                                       | <b>Knox</b>   |
|                               | 27   | 0600EST                    |                           |                          | 0 0                                    | 20K                                   | High Wind   |
|                               |      |                            |                           |                          |  |                                       | Several trees were downed in West Knoxville and Lonsdale producing power outages.   |
| <b><u>TENNESSEE, West</u></b> |      |                            |                           |                          |  |                                       |   |
| <b>Hardeman County</b>        |      |                            |                           |                          |  |                                       |   |
| Toone                         | 15   | 1745CST<br>1750CST         |                           |                          | 0 0                                    | 0.01K                                 | Hail (0.75)   |
| <b>Shelby County</b>          |      |                            |                           |                          |  |                                       |   |
| Memphis                       | 19   | 1535CST<br>1550CST         |                           |                          | 0 0                                    | 5K                                    | Thunderstorm Wind   |
|                               |      |                            |                           |                          |  |                                       | Some trees were blown down. One tree fell on a house.   |
| <b>Shelby County</b>          |      |                            |                           |                          |  |                                       |   |
| Bartlett                      | 19   | 1730CST<br>1915CST         |                           |                          | 0 0                                    | 1K                                    | Flash Flood   |
|                               |      |                            |                           |                          |  |                                       | Several streets were flooded.   |
| <b>Shelby County</b>          |      |                            |                           |                          |  |                                       |   |
| Memphis                       | 20   | 1000CST<br>1130CST         |                           |                          | 0 0                                    | 100K                                  | Flash Flood   |
|                               |      |                            |                           |                          |  |                                       | One house was flooded in south Memphis. Forty-four mobile homes were damaged in Frayser. Numerous streets and several underpasses were flooded.   |
| <b>TNZ020</b>                 |      |                            |                           |                          |  |                                       |   |
|                               |      |                            |                           |                          |  |                                       | <b>Gibson</b>   |
|                               | 20   | 1400CST<br>1430CST         |                           |                          | 0 0                                    | 1K                                    | High Wind   |
|                               |      |                            |                           |                          |  |                                       | The wall of an abandoned building collapsed in Milan.   |
| <b>Mcniary County</b>         |      |                            |                           |                          |  |                                       |   |
| Guys                          | 26   | 1550CST<br>1800CST         |                           |                          | 0 0                                    | 1K                                    | Flash Flood   |
|                               |      |                            |                           |                          |  |                                       | Some roads were flooded.  |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## TENNESSEE, West

**TNZ003>004-020>021-051>052-088>090 Weakley - Henry - Gibson - Carroll - Crockett - Madison - Shelby - Fayette - Hardeman**

|    |         |   |   |     |                 |
|----|---------|---|---|-----|-----------------|
| 26 | 1615CST | 0 | 0 | 55K | High Wind (G35) |
| 27 | 0005CST |   |   |     |                 |

Some trees were knocked down.

**Carroll County  
Countywide**

|    |                    |   |   |     |             |
|----|--------------------|---|---|-----|-------------|
| 26 | 1800CST<br>2330CST | 0 | 0 | 20K | Flash Flood |
|----|--------------------|---|---|-----|-------------|

A 42 inch diameter culvert was washed out. Several homes were flooded which forced some people to be evacuated.

**Chester County  
Countywide**

|    |                    |   |   |    |             |
|----|--------------------|---|---|----|-------------|
| 26 | 1800CST<br>2030CST | 0 | 0 | 1K | Flash Flood |
|----|--------------------|---|---|----|-------------|

Several roads were flooded.

**Crockett County  
Maury City**

|    |                    |   |   |    |             |
|----|--------------------|---|---|----|-------------|
| 26 | 1800CST<br>2330CST | 0 | 0 | 1K | Flash Flood |
|----|--------------------|---|---|----|-------------|

Several roads were flooded.

**Decatur County  
Countywide**

|    |                    |   |   |    |             |
|----|--------------------|---|---|----|-------------|
| 26 | 1800CST<br>2030CST | 0 | 0 | 1K | Flash Flood |
|----|--------------------|---|---|----|-------------|

Many roads were flooded.

**Gibson County  
Countywide**

|    |                    |   |   |    |     |             |
|----|--------------------|---|---|----|-----|-------------|
| 26 | 1800CST<br>2030CST | 0 | 0 | 1K | 50K | Flash Flood |
|----|--------------------|---|---|----|-----|-------------|

Thousands of acres of cotton & soybeans were flooded. Several roads were flooded.

**Henderson County  
Countywide**

|    |                    |   |   |    |             |
|----|--------------------|---|---|----|-------------|
| 26 | 1800CST<br>2030CST | 0 | 0 | 1K | Flash Flood |
|----|--------------------|---|---|----|-------------|

Many roads were flooded.

**Henry County  
Countywide**

|    |                    |   |   |    |             |
|----|--------------------|---|---|----|-------------|
| 26 | 1800CST<br>2330CST | 0 | 0 | 1K | Flash Flood |
|----|--------------------|---|---|----|-------------|

Fourteen roads were flooded.

**Madison County  
Countywide**

|    |                    |   |   |    |             |
|----|--------------------|---|---|----|-------------|
| 26 | 1800CST<br>2030CST | 0 | 0 | 1K | Flash Flood |
|----|--------------------|---|---|----|-------------|

Three children had to be rescued from a ditch. Many roads were flooded.

**Weakley County  
Countywide**

|    |                    |   |   |    |             |
|----|--------------------|---|---|----|-------------|
| 26 | 1900CST<br>2100CST | 0 | 0 | 1K | Flash Flood |
|----|--------------------|---|---|----|-------------|

A few roads were flooded.

## TEXAS, Central

**Tom Green County**

|    |         |   |   |             |
|----|---------|---|---|-------------|
| 14 | 1643CST | 0 | 0 | Hail (0.75) |
|----|---------|---|---|-------------|

**Jones County**

|    |         |   |   |    |                   |
|----|---------|---|---|----|-------------------|
| 18 | 1810CST | 0 | 0 | 7K | Thunderstorm Wind |
|----|---------|---|---|----|-------------------|

Strong thunderstorm winds destroyed a barn and broke glass in a windshield.

**Taylor County**

|    |         |   |   |    |                   |
|----|---------|---|---|----|-------------------|
| 18 | 1826CST | 0 | 0 | 2K | Thunderstorm Wind |
|----|---------|---|---|----|-------------------|

Strong thunderstorm winds blew down several power poles just southwest of Abilene.

**Fisher County**

|    |         |   |   |    |                   |
|----|---------|---|---|----|-------------------|
| 18 | 2145CST | 0 | 0 | 2K | Thunderstorm Wind |
|----|---------|---|---|----|-------------------|

Strong thunderstorm winds blew the roof off of a building.

A cold front moving through the area on the evening of the 18th produced isolated severe thunderstorms over the Big Country.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## TEXAS, Central Southeast

**TXZ226>227-235>238 Wharton - Fort Bend - Jackson - Matagorda - Brazoria - Galveston**

|           |                |          |          |             |                       |
|-----------|----------------|----------|----------|-------------|-----------------------|
| <b>05</b> | <b>0000CST</b> | <b>0</b> | <b>3</b> | <b>4.5M</b> | <b>Tropical Storm</b> |
| <b>07</b> | <b>1800CST</b> |          |          |             |                       |

Tropical Storm Fay began as an area of disturbed weather associated with a broad low pressure system in the northwest Gulf of Mexico during the first week of September. On Thursday, September 5th, this disturbance became the sixth tropical depression of the 2002 hurricane season with a poorly defined center located approximately 125 miles southeast of Galveston, Texas. That evening, just six hours after formation, the depression became Tropical Storm Fay as winds strengthened to 40 mph.

Fay remained nearly stationary Thursday night and through most of Friday. However, Fay did manage to slowly strengthen with winds reaching 60 mph late Friday morning (September 6th). On Friday evening, Fay began to redevelop further west near a cluster of strong thunderstorms. These thunderstorms began pushing inland along the southeast Texas coastline between San Luis Pass and Palacios around 11 PM CDT. As this cluster of thunderstorms moved inland, it produced extremely heavy rainfall, tornadoes, and strong damaging wind gusts. The center of Fay moved inland early Saturday morning (September 7th) near Palacios and weakened to a tropical depression late that morning.

There were no deaths in Southeast Texas associated with Fay. Three people were injured when a tornado damaged a mobile home in southern Fort Bend County Friday night. Fay produced a total of five tornadoes along a path from Freeport in Brazoria County to near Hungerford in Wharton County.

Flooding was significant in Brazoria, Matagorda and Wharton counties due to high tides and severe rainwater flooding. Between 10 and 20 inches of rain fell in an area from Freeport north-northwest to Boling in eastern Wharton County. The hardest hit area was near the community of Sweeny in southwest Brazoria County. In Brazoria County, over 1500 homes were flooded. Over 800 homes received damage from winds and tornadoes. Nearly 100 businesses and nearly 100 multi-family buildings were damaged. Nearly 500 cars were flooded. In Matagorda County, 130 single family homes and 32 businesses were damaged mainly by flood waters. As a result of high tides and heavy rain, over \$1.2 million in damage was done to public facilities including roads, bridges and public buildings. In Wharton County, over 200 single family homes were damaged or destroyed. Tornadoes damaged 7 homes while the remainder of the damage was due to flooding.

It is estimated that beach erosion from high tides produced \$3.5 million in damage to public roads, bridges and recreational areas across Galveston County. Another half a million dollars in damage from the high tides was inflicted on 135 residential structures. Of these 135 structures, 23 received major damage.

The highest reported wind gust was in the town of Clute in Brazoria County where an 83 mph wind gust was recorded at 120 AM CDT on Saturday.

The highest recorded tide level occurred at Jamaica Beach where the tide level reached 5.40 feet above mean low-lower water at 830 AM CDT Saturday morning, September 7th.

### Brazoria County Freeport

|           |                |          |          |            |                    |
|-----------|----------------|----------|----------|------------|--------------------|
| <b>06</b> | <b>1955CST</b> | <b>0</b> | <b>0</b> | <b>25K</b> | <b>Flash Flood</b> |
|           | <b>2055CST</b> |          |          |            |                    |

Numerous roads flooded and impassable from Freeport to Lake Jackson.

### Matagorda County Sargent

|           |                |          |          |             |                    |
|-----------|----------------|----------|----------|-------------|--------------------|
| <b>06</b> | <b>2145CST</b> | <b>0</b> | <b>0</b> | <b>500K</b> | <b>Flash Flood</b> |
| <b>07</b> | <b>0030CST</b> |          |          |             |                    |

Water in homes in Sargent.

### Brazoria County Freeport

|           |                |          |          |            |                                |
|-----------|----------------|----------|----------|------------|--------------------------------|
| <b>06</b> | <b>2225CST</b> | <b>0</b> | <b>0</b> | <b>50K</b> | <b>Thunderstorm Wind (G61)</b> |
|           | <b>2226CST</b> |          |          |            |                                |

Estimated 70 mph winds in Freeport/Surfside area uprooted and snapped numerous trees.

### Matagorda County Bay City

|           |                |          |          |            |                    |
|-----------|----------------|----------|----------|------------|--------------------|
| <b>06</b> | <b>2320CST</b> | <b>0</b> | <b>0</b> | <b>75K</b> | <b>Flash Flood</b> |
| <b>07</b> | <b>0215CST</b> |          |          |            |                    |

Water in homes in Bay City.

### Brazoria County Lake Jackson

|           |                |            |           |          |          |           |                     |
|-----------|----------------|------------|-----------|----------|----------|-----------|---------------------|
| <b>06</b> | <b>2345CST</b> | <b>0.1</b> | <b>.1</b> | <b>0</b> | <b>0</b> | <b>5K</b> | <b>Tornado (F0)</b> |
|           | <b>2346CST</b> |            |           |          |          |           |                     |

Tornado sighted west Lake Jackson and CR 332 (very brief touchdown).

### Matagorda County 7 SE Van Vleck to 3 SE Van Vleck

|           |                |          |           |          |          |            |                     |
|-----------|----------------|----------|-----------|----------|----------|------------|---------------------|
| <b>06</b> | <b>2355CST</b> | <b>4</b> | <b>.2</b> | <b>0</b> | <b>0</b> | <b>60K</b> | <b>Tornado (F0)</b> |
|           | <b>2358CST</b> |          |           |          |          |            |                     |

Tornado destroyed a storm on FM 457 between Van Vleck and Cedar Lane.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## TEXAS, Central Southeast

### **Brazoria County**

|               |    |                    |     |    |   |   |     |  |              |
|---------------|----|--------------------|-----|----|---|---|-----|--|--------------|
| West Columbia | 07 | 0030CST<br>0035CST | 0.2 | .1 | 0 | 0 | 25K |  | Tornado (F0) |
|---------------|----|--------------------|-----|----|---|---|-----|--|--------------|

Tornado downed numerous trees in West Columbia along Hwy 36.

### **Wharton County**

|        |    |                    |     |    |   |   |     |  |              |
|--------|----|--------------------|-----|----|---|---|-----|--|--------------|
| Boling | 07 | 0115CST<br>0120CST | 0.2 | .1 | 0 | 0 | 75K |  | Tornado (F0) |
|--------|----|--------------------|-----|----|---|---|-----|--|--------------|

Tornado destroyed one mobile home, damaged three others and tore apart a barn in Boling.

### **Brazoria County**

|        |    |                    |  |  |   |   |      |  |             |
|--------|----|--------------------|--|--|---|---|------|--|-------------|
| Sweeny | 07 | 0200CST<br>0400CST |  |  | 0 | 0 | 250K |  | Flash Flood |
|--------|----|--------------------|--|--|---|---|------|--|-------------|

Waist deep water and flooding in Sweeny.

### **Fort Bend County**

|           |    |                    |     |    |   |   |      |  |              |
|-----------|----|--------------------|-----|----|---|---|------|--|--------------|
| Needville | 07 | 0215CST<br>0220CST | 0.2 | .2 | 0 | 3 | 100K |  | Tornado (F1) |
|-----------|----|--------------------|-----|----|---|---|------|--|--------------|

Tornado injured three when mobile home was destroyed; numerous trees down too.

### **Matagorda County**

|          |    |         |  |  |   |   |     |  |                   |
|----------|----|---------|--|--|---|---|-----|--|-------------------|
| Midfield | 07 | 0215CST |  |  | 0 | 0 | 57K |  | Thunderstorm Wind |
|----------|----|---------|--|--|---|---|-----|--|-------------------|

Wind gusts damaged fire station and blew off the top of the pavillion at the community center.

### **Jackson County**

|         |    |         |  |  |   |   |     |  |                   |
|---------|----|---------|--|--|---|---|-----|--|-------------------|
| Cordele | 07 | 0230CST |  |  | 0 | 0 | 50K |  | Thunderstorm Wind |
|---------|----|---------|--|--|---|---|-----|--|-------------------|

Three barns damaged and phone poles down (reported by Lavaca Navidad River Authority).

### **Wharton County**

|         |    |                    |  |  |   |   |     |  |             |
|---------|----|--------------------|--|--|---|---|-----|--|-------------|
| Wharton | 07 | 0255CST<br>0400CST |  |  | 0 | 0 | 95K |  | Flash Flood |
|---------|----|--------------------|--|--|---|---|-----|--|-------------|

Water in homes in Wharton.

### **Washington County**

|               |    |                    |  |  |   |   |     |  |             |
|---------------|----|--------------------|--|--|---|---|-----|--|-------------|
| Chappell Hill | 07 | 1300CST<br>1530CST |  |  | 0 | 0 | 10K |  | Flash Flood |
|---------------|----|--------------------|--|--|---|---|-----|--|-------------|

Water covering FM 1371 near Chappell Hill.

### **Liberty County**

|           |    |                    |  |  |   |   |     |  |             |
|-----------|----|--------------------|--|--|---|---|-----|--|-------------|
| Cleveland | 08 | 0905CST<br>1330CST |  |  | 0 | 0 | 10K |  | Flash Flood |
|-----------|----|--------------------|--|--|---|---|-----|--|-------------|

Many roads completely submerged just east of Cleveland.

### **Harris County**

|          |    |                    |  |  |   |   |     |  |             |
|----------|----|--------------------|--|--|---|---|-----|--|-------------|
| Pasadena | 08 | 1235CST<br>1515CST |  |  | 0 | 0 | 15K |  | Flash Flood |
|----------|----|--------------------|--|--|---|---|-----|--|-------------|

Flooding in Pasadena and Deer Park; many roads closed.

### **Brazoria County**

|          |    |                    |  |  |   |   |     |  |             |
|----------|----|--------------------|--|--|---|---|-----|--|-------------|
| Freeport | 09 | 0740CST<br>1030CST |  |  | 0 | 0 | 30K |  | Flash Flood |
|----------|----|--------------------|--|--|---|---|-----|--|-------------|

Two feet of water on streets in Freeport.

### **Brazoria County**

|            |    |                    |  |  |   |   |     |  |             |
|------------|----|--------------------|--|--|---|---|-----|--|-------------|
| Countywide | 10 | 0110CST<br>0830CST |  |  | 0 | 0 | 30K |  | Flash Flood |
|------------|----|--------------------|--|--|---|---|-----|--|-------------|

Countywide flooding due to training cells.

### **Matagorda County**

|          |    |                    |  |  |   |   |     |  |             |
|----------|----|--------------------|--|--|---|---|-----|--|-------------|
| Bay City | 10 | 0110CST<br>0630CST |  |  | 0 | 0 | 30K |  | Flash Flood |
|----------|----|--------------------|--|--|---|---|-----|--|-------------|

Flooded roads in Bay City and Cedar Lane due to training cells.

### **Galveston County**

|               |    |                    |  |  |   |   |     |  |             |
|---------------|----|--------------------|--|--|---|---|-----|--|-------------|
| Jamaica Beach | 10 | 0325CST<br>0830CST |  |  | 0 | 0 | 45K |  | Flash Flood |
|---------------|----|--------------------|--|--|---|---|-----|--|-------------|

Flooding in Jamaica Beach and Pirates Beach.

### **Liberty County**

|         |    |                    |  |  |   |   |     |  |             |
|---------|----|--------------------|--|--|---|---|-----|--|-------------|
| Liberty | 19 | 1700CST<br>2115CST |  |  | 0 | 0 | 35K |  | Flash Flood |
|---------|----|--------------------|--|--|---|---|-----|--|-------------|

Flooding in Liberty and Dayton; portions of Hwy 90 closed in Liberty.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## TEXAS, Central Southeast

### **Harris County**

|                |           |                |  |  |          |          |            |  |                    |
|----------------|-----------|----------------|--|--|----------|----------|------------|--|--------------------|
| <b>Houston</b> | <b>19</b> | <b>1717CST</b> |  |  | <b>0</b> | <b>0</b> | <b>55K</b> |  | <b>Flash Flood</b> |
|                |           | <b>1930CST</b> |  |  |          |          |            |  |                    |

Many roads under water and impassable especially north of downtown Houston and near the west loop.

### **Galveston County**

|                    |           |                |  |  |          |          |            |  |                    |
|--------------------|-----------|----------------|--|--|----------|----------|------------|--|--------------------|
| <b>League City</b> | <b>19</b> | <b>2029CST</b> |  |  | <b>0</b> | <b>0</b> | <b>25K</b> |  | <b>Flash Flood</b> |
|                    |           | <b>2305CST</b> |  |  |          |          |            |  |                    |

High water in and around League City.

## TEXAS, Extreme West

NONE REPORTED.

## TEXAS, Mid - South

### **Goliad County**

|                      |           |                |  |  |          |          |  |  |                    |
|----------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>North Portion</b> | <b>08</b> | <b>0538CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Flash Flood</b> |
|                      |           | <b>0738CST</b> |  |  |          |          |  |  |                    |

### **Goliad County**

|                 |           |                |  |  |          |          |  |  |                    |
|-----------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>Berclair</b> | <b>08</b> | <b>0745CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Flash Flood</b> |
|                 |           | <b>0945CST</b> |  |  |          |          |  |  |                    |

### **Goliad County**

|                                |           |                |  |  |          |          |  |  |                    |
|--------------------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>Goliad to<br/>Schroeder</b> | <b>08</b> | <b>1000CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Flash Flood</b> |
|                                |           | <b>1200CST</b> |  |  |          |          |  |  |                    |

### **Bee County**

|                 |           |                |  |  |          |          |  |  |                    |
|-----------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>Normanna</b> | <b>08</b> | <b>1649CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Flash Flood</b> |
|                 |           | <b>1849CST</b> |  |  |          |          |  |  |                    |

Water on road

### **Jim Wells County**

|                                |           |                |            |            |          |          |  |  |                     |
|--------------------------------|-----------|----------------|------------|------------|----------|----------|--|--|---------------------|
| <b>Ben Bolt to<br/>Premont</b> | <b>08</b> | <b>0854CST</b> | <b>0.5</b> | <b>500</b> | <b>0</b> | <b>0</b> |  |  | <b>Tornado (F0)</b> |
|--------------------------------|-----------|----------------|------------|------------|----------|----------|--|--|---------------------|

17 miles north of Falfurrias

### **Jim Wells County**

|                 |           |                |            |            |          |          |  |  |                     |
|-----------------|-----------|----------------|------------|------------|----------|----------|--|--|---------------------|
| <b>Ben Bolt</b> | <b>08</b> | <b>0946CST</b> | <b>0.6</b> | <b>600</b> | <b>0</b> | <b>0</b> |  |  | <b>Tornado (F0)</b> |
|-----------------|-----------|----------------|------------|------------|----------|----------|--|--|---------------------|

### **Bee County**

|                 |           |                |            |            |          |          |  |  |                     |
|-----------------|-----------|----------------|------------|------------|----------|----------|--|--|---------------------|
| <b>Beeville</b> | <b>08</b> | <b>1406CST</b> | <b>0.5</b> | <b>500</b> | <b>0</b> | <b>0</b> |  |  | <b>Tornado (F0)</b> |
|                 |           | <b>1506CST</b> |            |            |          |          |  |  |                     |

Multiple funnels reported nw of Beeville

### **Live Oak County**

|                         |           |                |            |            |          |          |  |  |                     |
|-------------------------|-----------|----------------|------------|------------|----------|----------|--|--|---------------------|
| <b>Live Oak Co Arpt</b> | <b>08</b> | <b>1406CST</b> | <b>0.6</b> | <b>500</b> | <b>0</b> | <b>0</b> |  |  | <b>Tornado (F0)</b> |
|-------------------------|-----------|----------------|------------|------------|----------|----------|--|--|---------------------|

### **Goliad County**

|               |           |                |            |            |          |          |  |  |                     |
|---------------|-----------|----------------|------------|------------|----------|----------|--|--|---------------------|
| <b>Charco</b> | <b>08</b> | <b>1502CST</b> | <b>0.4</b> | <b>400</b> | <b>0</b> | <b>0</b> |  |  | <b>Tornado (F0)</b> |
|---------------|-----------|----------------|------------|------------|----------|----------|--|--|---------------------|

### **Goliad County**

|               |           |                |            |            |          |          |  |  |                     |
|---------------|-----------|----------------|------------|------------|----------|----------|--|--|---------------------|
| <b>Goliad</b> | <b>08</b> | <b>1545CST</b> | <b>0.6</b> | <b>500</b> | <b>0</b> | <b>0</b> |  |  | <b>Tornado (F0)</b> |
|---------------|-----------|----------------|------------|------------|----------|----------|--|--|---------------------|

15 mile west of Goliad

### **La Salle County**

|                     |           |                |  |  |          |          |  |  |                    |
|---------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>West Portion</b> | <b>08</b> | <b>2239CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Flash Flood</b> |
|                     |           | <b>2339CST</b> |  |  |          |          |  |  |                    |

### **Mcmullen County**

|                          |           |                |  |  |          |          |  |  |                    |
|--------------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>Southeast Portion</b> | <b>08</b> | <b>2239CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Flash Flood</b> |
|                          |           | <b>2339CST</b> |  |  |          |          |  |  |                    |

### **La Salle County**

|                   |           |                |  |  |          |          |  |  |                    |
|-------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>Countywide</b> | <b>09</b> | <b>0130CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Flash Flood</b> |
|                   |           | <b>0230CST</b> |  |  |          |          |  |  |                    |

### **Mcmullen County**

|                        |           |                |  |  |          |          |  |  |                    |
|------------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>Central Portion</b> | <b>09</b> | <b>0130CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Flash Flood</b> |
|                        |           | <b>0230CST</b> |  |  |          |          |  |  |                    |

### **La Salle County**

|                        |           |                |  |  |          |          |  |  |                    |
|------------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>Central Portion</b> | <b>09</b> | <b>0530CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Flash Flood</b> |
|                        |           | <b>0630CST</b> |  |  |          |          |  |  |                    |

### **Mcmullen County**

|                   |           |                |  |  |          |          |  |  |                    |
|-------------------|-----------|----------------|--|--|----------|----------|--|--|--------------------|
| <b>Countywide</b> | <b>09</b> | <b>0530CST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Flash Flood</b> |
|                   |           | <b>0630CST</b> |  |  |          |          |  |  |                    |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## TEXAS, Mid - South

|                                 |    |                    |  |  |   |   |  |  |             |
|---------------------------------|----|--------------------|--|--|---|---|--|--|-------------|
| <b>Webb County</b>              |    |                    |  |  |   |   |  |  |             |
| Countywide                      | 09 | 0530CST<br>0630CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>Jim Wells County</b>         |    |                    |  |  |   |   |  |  |             |
| Central Portion                 | 09 | 1250CST<br>1350CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>La Salle County</b>          |    |                    |  |  |   |   |  |  |             |
| South Portion                   | 09 | 1547CST<br>1647CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>Webb County</b>              |    |                    |  |  |   |   |  |  |             |
| North Portion                   | 09 | 1547CST<br>1647CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>Duval County</b>             |    |                    |  |  |   |   |  |  |             |
| East Central Portion            | 09 | 2134CST<br>2234CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>Webb County</b>              |    |                    |  |  |   |   |  |  |             |
| North Central Portion           | 09 | 2134CST<br>2234CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>Webb County</b>              |    |                    |  |  |   |   |  |  |             |
| Aguilares                       | 09 | 1747CST<br>1847CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>Webb County</b>              |    |                    |  |  |   |   |  |  |             |
| Countywide                      | 09 | 1942CST<br>2042CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>Webb County</b>              |    |                    |  |  |   |   |  |  |             |
| Aguilares                       | 10 | 0055CST<br>0155CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>La Salle County</b>          |    |                    |  |  |   |   |  |  |             |
| Countywide                      | 15 | 0238CST<br>0338CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>Mcmullen County</b>          |    |                    |  |  |   |   |  |  |             |
| Countywide                      | 15 | 0238CST<br>0338CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>Webb County</b>              |    |                    |  |  |   |   |  |  |             |
| Countywide                      | 15 | 0238CST<br>0338CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>Live Oak County</b>          |    |                    |  |  |   |   |  |  |             |
| George West to<br>Three Rivers  | 15 | 0407CST<br>0507CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>Bee County</b>               |    |                    |  |  |   |   |  |  |             |
| Beeville to<br>Pawnee           | 15 | 0448CST<br>0548CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>La Salle County</b>          |    |                    |  |  |   |   |  |  |             |
| Countywide                      | 15 | 0551CST<br>0651CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>Mcmullen County</b>          |    |                    |  |  |   |   |  |  |             |
| Countywide                      | 15 | 0551CST<br>0651CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>Bee County</b>               |    |                    |  |  |   |   |  |  |             |
| Countywide                      | 15 | 0626CST<br>0726CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>Live Oak County</b>          |    |                    |  |  |   |   |  |  |             |
| Countywide                      | 15 | 0626CST<br>0726CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>Nueces County</b>            |    |                    |  |  |   |   |  |  |             |
| Robstown Co Arpt to<br>Banquete | 16 | 1755CST<br>1855CST |  |  | 0 | 0 |  |  | Flash Flood |
| <b>Nueces County</b>            |    |                    |  |  |   |   |  |  |             |
| Petronila to<br>Corpus Christi  | 17 | 1730CST<br>1830CST |  |  | 0 | 0 |  |  | Flash Flood |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002                       |      |  |                           |                          |                      |         |                     |       |                         |
|--------------------------------------|------|--|---------------------------|--------------------------|----------------------|---------|---------------------|-------|-------------------------|
| Location                             | Date | Time<br>Local/<br>Standard   | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm      |
|                                      |      |  |                           |                          | Killed               | Injured | Property            | Crops |                         |
| <b><u>TEXAS, Mid - South</u></b>     |      |  |                           |                          |                      |         |                     |       |                         |
| <b>Duval County</b>                  |      |  |                           |                          |                      |         |                     |       |                         |
| South Central Portion                | 19   | 1814CST<br>1914CST   |                           |                          | 0                    | 0       |                     |       | Flash Flood             |
| <b>Nueces County</b>                 |      |  |                           |                          |                      |         |                     |       |                         |
| Central Portion                      | 19   | 2205CST<br>2305CST   |                           |                          | 0                    | 0       |                     |       | Flash Flood             |
| <b>Duval County</b>                  |      |  |                           |                          |                      |         |                     |       |                         |
| Concepcion                           | 19   | 1824CST  |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G50) |
| <b>Aransas County</b>                |      |  |                           |                          |                      |         |                     |       |                         |
| Central Portion                      | 19   | 2109CST<br>Limbs down wind 65 mph gust   |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G51) |
| <b>Goliad County</b>                 |      |  |                           |                          |                      |         |                     |       |                         |
| Goliad to<br>Weesatche               | 19   | 1836CST<br>1936CST   |                           |                          | 0                    | 0       |                     |       | Flash Flood             |
| <b>Kleberg County</b>                |      |  |                           |                          |                      |         |                     |       |                         |
| Ricardo                              | 19   | 1948CST<br>2048CST   |                           |                          | 0                    | 0       |                     |       | Flash Flood             |
| <b>Bee County</b>                    |      |  |                           |                          |                      |         |                     |       |                         |
| Countywide                           | 19   | 2058CST<br>2158CST   |                           |                          | 0                    | 0       |                     |       | Flash Flood             |
| <b>Refugio County</b>                |      |  |                           |                          |                      |         |                     |       |                         |
| Countywide                           | 19   | 2058CST<br>2158CST   |                           |                          | 0                    | 0       |                     |       | Flash Flood             |
| <b>San Patricio County</b>           |      |  |                           |                          |                      |         |                     |       |                         |
| Countywide                           | 19   | 2058CST<br>2158CST   |                           |                          | 0                    | 0       |                     |       | Flash Flood             |
| <b><u>TEXAS, North</u></b>           |      |  |                           |                          |                      |         |                     |       |                         |
| <b>Henderson County</b>              |      |  |                           |                          |                      |         |                     |       |                         |
| Athens                               | 19   | 1215CST<br>Trees and power lines were blown down west of Athens.   |                           |                          | 0                    | 0       | 2K                  |       | Thunderstorm Wind (G52) |
| <b>Lamar County</b>                  |      |  |                           |                          |                      |         |                     |       |                         |
| Roxton                               | 23   | 1100CST<br>Trees were uprooted by high winds.  |                           |                          | 0                    | 0       | 1K                  |       | Thunderstorm Wind (G52) |
| <b>Fannin County</b>                 |      |  |                           |                          |                      |         |                     |       |                         |
| Windom                               | 23   | 1120CST<br>The roof of a house was blown off and 180 pieces of sheetrock were destroyed.   |                           |                          | 0                    | 0       | 6K                  |       | Thunderstorm Wind (G52) |
| <b>Dallas County</b>                 |      |  |                           |                          |                      |         |                     |       |                         |
| Dallas                               | 23   | 1400CST<br>Power lines and power poles were blown down by high winds. One power pole was blown down onto a car and the side of a church in the Oak Cliff area of Dallas. |                           |                          | 0                    | 0       | 5K                  |       | Thunderstorm Wind (G52) |
| <b><u>TEXAS, North Panhandle</u></b> |      |  |                           |                          |                      |         |                     |       |                         |
| <b>Carson County</b>                 |      |  |                           |                          |                      |         |                     |       |                         |
| 2 N Pantex                           | 05   | 1745CST  |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G56) |
| <b>Carson County</b>                 |      |  |                           |                          |                      |         |                     |       |                         |
| Pantex                               | 05   | 1804CST  |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G56) |
| <b>Carson County</b>                 |      |  |                           |                          |                      |         |                     |       |                         |
| 9 SW Panhandle                       | 05   | 1815CST<br>Trucks were reported blown off the roadway and there was extensive damage to a home west of Panhandle when a large tree fell on the home.                     |                           |                          | 0                    | 0       | 60K                 |       | Thunderstorm Wind (G61) |
| <b>Potter County</b>                 |      |  |                           |                          |                      |         |                     |       |                         |
| 8 E Amarillo                         | 05   | 1821CST  |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G52) |
| <b>Potter County</b>                 |      |  |                           |                          |                      |         |                     |       |                         |
| 8 E Amarillo                         | 05   | 1824CST  |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G56) |
| <b>Potter County</b>                 |      |  |                           |                          |                      |         |                     |       |                         |
| 10 E Amarillo                        | 05   | 1825CST  |                           |                          | 0                    | 0       |                     |       | Hail (0.88)             |
| <b>Armstrong County</b>              |      |  |                           |                          |                      |         |                     |       |                         |
| Washburn                             | 05   | 1832CST<br>1840CST   |                           |                          | 0                    | 0       |                     |       | Hail (0.88)             |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002  |      |                            |                           |                          |                      |   |                     |          |       |                         |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|----------|-------|-------------------------|
| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage | Property | Crops | Character of Storm      |
| TEXAS, North Panhandle  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| Potter County   |      |                            |                           |                          |                      |   |                     |          |       |                         |
| 9 E Amarillo  | 05   | 1840CST                    |                           |                          | 0                    | 0 |                     |          |       | Hail (1.75)             |
| Potter County   |      |                            |                           |                          |                      |   |                     |          |       |                         |
| 9 E Amarillo  | 05   | 1840CST                    |                           |                          | 0                    | 0 |                     |          |       | Thunderstorm Wind (G52) |
| Randall County  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| 11 NE Canyon  | 05   | 1908CST                    |                           |                          | 0                    | 0 |                     |          |       | Hail (0.75)             |
| Severe thunderstorms producing damaging winds and large hail moved across the southern and central Texas panhandle during the early evening hours.  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| Dallam County   |      |                            |                           |                          |                      |   |                     |          |       |                         |
| Kerrick   | 13   | 1555CST                    |                           |                          | 0                    | 0 |                     |          |       | Hail (1.75)             |
| Severe thunderstorm producing large hail moved across the extreme northwestern Texas panhandle during the late afternoon hours.   |      |                            |                           |                          |                      |   |                     |          |       |                         |
| TEXAS, Northeast  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| Smith County  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| 2 N Tyler   | 19   | 1300CST                    |                           |                          | 0                    | 0 |                     |          |       | Thunderstorm Wind (G62) |
| Several large trees down over CR 285.   |      |                            |                           |                          |                      |   |                     |          |       |                         |
| Smith County  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| 3 S Tyler   | 19   | 1305CST                    |                           |                          | 0                    | 0 |                     |          |       | Thunderstorm Wind (G62) |
| Numerous large trees down over FM 2964.   |      |                            |                           |                          |                      |   |                     |          |       |                         |
| TEXAS, South  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| Jim Hogg County   |      |                            |                           |                          |                      |   |                     |          |       |                         |
| 10 S Hebbronville   | 09   | 2158CST                    |                           |                          | 0                    | 0 |                     |          |       | Flash Flood             |
|   | 10   | 0100CST                    |                           |                          |                      |   |                     |          |       |                         |
| Intense thunderstorms produced flash flooding south of Hebbronville. The flood waters resulted in the temporary closing of Highway 1017.  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| TXZ249  |      |                            |                           |                          |                      |   |                     |          |       |                         |
|   |      | Jim Hogg                   |                           |                          |                      |   |                     |          |       |                         |
|   | 10   | 0100CST                    |                           |                          | 0                    | 0 |                     |          |       | Flood                   |
|   |      | 1200CST                    |                           |                          |                      |   |                     |          |       |                         |
| Flooding continued over the area from intense thunderstorms the night before. Highways 1017 and 359 remained closed due to floodwaters.   |      |                            |                           |                          |                      |   |                     |          |       |                         |
| Starr County  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| 20 NE Rio Grande City   | 10   | 0227CST                    |                           |                          | 0                    | 0 |                     |          |       | Flash Flood             |
|   |      | 0400CST                    |                           |                          |                      |   |                     |          |       |                         |
| Highway 755 between Highways 490 and 2294 was closed due to flash flooding produced by strong thunderstorms.  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| Hidalgo County  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| Mission   | 15   | 1530CST                    |                           |                          | 0                    | 0 |                     |          |       | Flash Flood             |
|   |      | 1800CST                    |                           |                          |                      |   |                     |          |       |                         |
| Flash flooding of roads, homes, and businesses in Mission occurred as intense thunderstorms dropped heavy rain over the area.   |      |                            |                           |                          |                      |   |                     |          |       |                         |
| Hidalgo County  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| 10 N Mercedes   | 19   | 2200CST                    |                           |                          | 0                    | 0 |                     |          |       | Thunderstorm Wind (G65) |
| Strong thunderstorm winds downed trees and damaged power lines, resulting in loss of power to residents.  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| Cameron County  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| 5 N La Feria  | 19   | 2217CST                    |                           |                          | 0                    | 0 |                     |          |       | Thunderstorm Wind (G65) |
| Strong thunderstorm winds downed trees and damaged power lines, resulting in loss of power to residents.  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| Willacy County  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| 2 E Sebastian   | 19   | 2232CST                    |                           |                          | 0                    | 0 |                     |          |       | Thunderstorm Wind (G65) |
| Strong thunderstorm winds downed trees and damaged power lines, resulting in loss of power to residents.  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| Cameron County  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| San Benito  | 19   | 2240CST                    |                           |                          | 0                    | 0 |                     |          |       | Thunderstorm Wind (G75) |
| Several power poles were downed by strong thunderstorm winds, resulting in loss of power for residents in San Benito.   |      |                            |                           |                          |                      |   |                     |          |       |                         |
| Willacy County  |      |                            |                           |                          |                      |   |                     |          |       |                         |
| Raymondville  | 19   | 2300CST                    |                           |                          | 0                    | 0 |                     |          |       | Flash Flood             |
|   | 20   | 0100CST                    |                           |                          |                      |   |                     |          |       |                         |
| Intense thunderstorms produced flash flooding of homes and city streets in Raymondville. Portions of Highway 186 near Raymondville were also closed due to floodwaters.   |      |                            |                           |                          |                      |   |                     |          |       |                         |
| TXZ255  |      |                            |                           |                          |                      |   |                     |          |       |                         |
|   |      | Cameron                    |                           |                          |                      |   |                     |          |       |                         |
|   | 22   | 1530CST                    |                           |                          | 0                    | 0 |                     |          |       | Flood                   |
|   | 23   | 1530CST                    |                           |                          |                      |   |                     |          |       |                         |
| Hurricane Isidore produced large swells over the Gulf of Mexico, which eventually led to heavy surf and coastal flooding over South Padre Island. The tides were 2-4 feet above normal high tide levels, and caused some flooding of roads in the area. |      |                            |                           |                          |                      |   |                     |          |       |                         |

# Storm Data and Unusual Weather Phenomena

September 2002

|   |          |                            |                           |                          |                      |   |                     |       | September 2002       |
|---|----------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|-------|----------------------|
| Location  | Date     | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage | Crops | Character of Storm   |
|   |          |                            |                           |                          |                      |   |                     |       |                      |
| <b><u>TEXAS, South</u></b>  |          |                            |                           |                          |                      |   |                     |       |                      |
| <b>Cameron County</b>   |          |                            |                           |                          |                      |   |                     |       |                      |
| Brownsville   | 23       | 0900CST<br>1700CST         |                           |                          | 0                    | 0 |                     |       | Urban/Sml Stream Fld |
| Day-long moderate to heavy rains produced extensive urban flooding as well as flooding of low spots in Brownsville.   |          |                            |                           |                          |                      |   |                     |       |                      |
| <b><u>TEXAS, South Central</u></b>  |          |                            |                           |                          |                      |   |                     |       |                      |
| <b>Bexar County</b>   |          |                            |                           |                          |                      |   |                     |       |                      |
| Countywide  | 07       | 1100CST<br>1200CST         |                           |                          | 0                    | 0 | 0                   | 0     | Flash Flood          |
| General 1 to 2 inch rainfall with isolated totals to 3 inches. No damage was indicated.   |          |                            |                           |                          |                      |   |                     |       |                      |
| <b>Medina County</b>  |          |                            |                           |                          |                      |   |                     |       |                      |
| Countywide  | 07       | 1245CST<br>1700CST         |                           |                          | 0                    | 0 | 20K                 | 0     | Flash Flood          |
| General 2 inch rainfall with isolated totals to 4 inches. Minor damage to roads and bridges.  |          |                            |                           |                          |                      |   |                     |       |                      |
| <b>Bandera County</b>   |          |                            |                           |                          |                      |   |                     |       |                      |
| Countywide  | 07       | 1430CST<br>1800CST         |                           |                          | 0                    | 0 | 50K                 | 0     | Flash Flood          |
| General 2 inch rainfall with isolated totals to 6 inches. Damage to roads and bridges.  |          |                            |                           |                          |                      |   |                     |       |                      |
| <b>Uvalde County</b>  |          |                            |                           |                          |                      |   |                     |       |                      |
| Countywide  | 07       | 1545CST<br>1930CST         |                           |                          | 0                    | 0 | 20K                 | 0     | Flash Flood          |
| General 2 inch rainfall with isolated totals to 4 inches. Minor damage to roads and bridges.<br>Isolated showers had occurred over much of South Central Texas in advance of Tropical Storm Fay on Friday, Sept. 6. Tropical storm Fay came ashore near Palacios, near 6 am CST on Saturday, Sept. 7. Rainfall, at first spotty, became widespread by mid morning. General ½ to 1 inch rains fell across the central parts of South Central Texas. Heavier amounts had fallen from Bandera to San Antonio to Uvalde that averaged between 1 and 2 inches, with isolated totals to near 6 inches. Flash flooding developed over Bandera, Bexar, Medina, and Uvalde Counties in the early afternoon, ending in the early evening. |          |                            |                           |                          |                      |   |                     |       |                      |
| <b>Travis County</b>  |          |                            |                           |                          |                      |   |                     |       |                      |
| Countywide  | 07       | 1930CST<br>2330CST         |                           |                          | 0                    | 0 | 0                   | 0     | Flash Flood          |
| General 1 to 2 inch rainfall with isolated totals to 3 inches. No damage was indicated.   |          |                            |                           |                          |                      |   |                     |       |                      |
| <b>Williamson County</b>  |          |                            |                           |                          |                      |   |                     |       |                      |
| Countywide  | 07       | 1945CST<br>2300CST         |                           |                          | 0                    | 0 | 0                   | 0     | Flash Flood          |
| General 1 to 2 inch rainfall with isolated totals to 3 inches. No damage was indicated.   |          |                            |                           |                          |                      |   |                     |       |                      |
| <b>Burnet County</b>  |          |                            |                           |                          |                      |   |                     |       |                      |
| Countywide  | 07       | 2015CST<br>2300CST         |                           |                          | 0                    | 0 | 20K                 | 0     | Flash Flood          |
| General 2 inch rainfall with isolated totals to 4 inches. Minor damage to roads and bridges.  |          |                            |                           |                          |                      |   |                     |       |                      |
| <b>Gillespie County</b>   |          |                            |                           |                          |                      |   |                     |       |                      |
| Countywide  | 07       | 2030CST<br>2130CST         |                           |                          | 0                    | 0 | 0                   | 0     | Flash Flood          |
| General 1 to 2 inch rainfall with isolated totals to 3 inches. No damage was indicated.   |          |                            |                           |                          |                      |   |                     |       |                      |
| <b>Llano County</b>   |          |                            |                           |                          |                      |   |                     |       |                      |
| Countywide  | 07<br>08 | 2030CST<br>0030CST         |                           |                          | 0                    | 0 | 0                   | 0     | Flash Flood          |
| General 1 to 2 inch rainfall with isolated totals to 3 inches. No damage was indicated.<br>By Saturday evening, the remnants of Fay had moved to near Dilley, and storms stretched from the Rio Grande River near Del Rio and Eagle Pass eastward to Giddings, Schulenburg and Hallettsville. A band of very heavy rain was moving slowly northwestward from the Austin area into the eastern Hill Country. Rain amounts in this area averaged 1 to 2 inches with isolated totals to 4 and 5 inches. Flash flooding developed in the evening, ending near midnight.   |          |                            |                           |                          |                      |   |                     |       |                      |
| <b>Bexar County</b>   |          |                            |                           |                          |                      |   |                     |       |                      |
| Countywide  | 08       | 0345CST<br>1600CST         |                           |                          | 0                    | 0 | 50K                 | 0     | Flash Flood          |
| Showers forming near midnight from the southeast parts of South Central Texas to near San Antonio spread slowly northwestward. Over Bexar County they produced a general 1 to 2 inch rainfall with some sections receiving up to 4 inches. With soils saturated from rainfall the previous day, flash flooding redeveloped quickly countywide. Damage was confined to county roads and bridges.<br>flash  |          |                            |                           |                          |                      |   |                     |       |                      |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location   | Date     | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|--|----------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|  |          |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b>TEXAS, South Central</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>Travis County</b>   |          |                            |                           |                          |                      |         |                     |       |                    |
| Countywide   | 08       | 0915CST<br>1130CST         |                           |                          | 0                    | 2       | 30K                 | 0     | Flash Flood        |
| General 1 to 2 inch rainfall with isolated totals to 3 inches. Flash flooding forced 3 rescues. Two in Pflugerville climbed into a tree after their car stalled in deep water. One man in Austin also climbed into a tree after his pickup stalled in deep water. No other damage was indicated.   |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>Williamson County</b>   |          |                            |                           |                          |                      |         |                     |       |                    |
| Countywide   | 08       | 0930CST<br>1230CST         |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood        |
| General 1 to 2 inch rainfall with isolated totals to 3 inches. No damage was indicated.  |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>Burnet County</b>   |          |                            |                           |                          |                      |         |                     |       |                    |
| Countywide   | 08       | 1000CST<br>1200CST         |                           |                          | 0                    | 0       | 30K                 | 0     | Flash Flood        |
| General 2 inch rainfall with isolated totals to 5 inches. Damage was reported again on Sept. 8 to area roads and bridges.  |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>Llano County</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| Countywide   | 08       | 1000CST<br>1130CST         |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood        |
| General 1 inch rainfall with isolated totals to 3 inches. No damage was indicated.   |          |                            |                           |                          |                      |         |                     |       |                    |
| The showers that had formed over the southeast part of South Central Texas near midnight moved into the Austin area and northern Hill Country in the early morning. Rain amounts averaged 1 to 2 inches with isolated totals to near 5 inches. With soils already saturated from rainfall on September 7, flash flooding developed by mid morning, ending near noon.   |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>TXZ205</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>Bexar</b>   |          |                            |                           |                          |                      |         |                     |       |                    |
|  | 08       | 0929CST                    |                           |                          | 0                    | 0       |                     |       | Flood              |
|  | 11       | 1501CST                    |                           |                          |                      |         |                     |       |                    |
| The San Antonio River crested at 44.41 feet at Elmendorf on September 10 at 0630CST, where flood stage is 35.0 feet.   |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>Bexar County</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| Countywide   | 08       | 1630CST<br>1900CST         |                           |                          | 0                    | 2       | 80K                 | 0     | Flash Flood        |
| General 2 inch rainfall with isolated totals to 4 inches. Alamo Community College District was forced to close due to high water on entry roads. Around a dozen rescues in deep water in the county, but none in San Antonio. One mother and daughter drove past a barricade on Ingram Road and had to be rescued as their 2-door coupe became submerged. Minor damage was reported to bridges and county roads.   |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>Karnes County</b>   |          |                            |                           |                          |                      |         |                     |       |                    |
| Countywide   | 08       | 1630CST<br>1830CST         |                           |                          | 0                    | 0       | 20K                 | 0     | Flash Flood        |
| General 2 inch rainfall with isolated totals to 5 inches. Minor damage was reported to bridges and county roads.   |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>Wilson County</b>   |          |                            |                           |                          |                      |         |                     |       |                    |
| Countywide   | 08       | 1630CST<br>1900CST         |                           |                          | 0                    | 5       | 80K                 | 0     | Flash Flood        |
| General 2 to 3 inch rainfall was indicated across the county with isolated totals to 9 inches in the western part of the county. Five high water rescues were required. Considerable damage was indicated to bridges and county roads.   |          |                            |                           |                          |                      |         |                     |       |                    |
| By late afternoon, rainfall was widespread across South Central Texas, having spread westward to the Rio Grande. A band of heavy rain stretching from near San Antonio through Floresville to Karnes City produced an additional round of flash flooding from late afternoon into the early evening. Rain amounts averaged from 1 to 2 inches with isolated totals to near 9 inches in the western part of Wilson County.  |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>Medina County</b>   |          |                            |                           |                          |                      |         |                     |       |                    |
| Countywide   | 08<br>09 | 1900CST<br>0700CST         |                           |                          | 0                    | 9       | 200K                | 100K  | Flash Flood        |
| General 2 to 3 inch rainfall was indicated with accumulations to 9 inches in the southeastern portion of the county. Around a dozen homes had flood damage in LaCoste. LaCoste city officials were forced to leave their offices due to flooding for the third time this year. Nine motorists were rescued from deep water. All Medina Valley schools were closed on Monday. Damage was also reported to bridges and county roads.   |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>Frio County</b>   |          |                            |                           |                          |                      |         |                     |       |                    |
| Countywide   | 08<br>09 | 2030CST<br>0800CST         |                           |                          | 0                    | 15      | 700K                | 100K  | Flash Flood        |
| General 2 to 3 inch rainfall was indicated across the county with amounts averaging 5 inches along FM140 from Frio Town through Pearsall to the Atascosa County line. A large part of the highway from Pearsall to the Atascosa County line received up to 8 inches of rain, with isolated totals to 12 inches. High water trapped people in their homes. Just under two dozen homes as well as several businesses in Pearsall received flood damage. Several cars were also flooded out. One woman was rescued from her flooded home by helicopter. Most schools in the Pearsall area were closed on Monday due roads that were blocked. Widespread damage was reported to FM140 and bridges along the highway as well as to roads in Pearsall. |          |                            |                           |                          |                      |         |                     |       |                    |

# Storm Data and Unusual Weather Phenomena

September 2002

|  |      |                            |                           |                          |                      |         |                     |                    | September 2002 |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|--------------------|----------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage | Character of Storm |                |
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops              |                |
| <b><u>TEXAS, South Central</u></b>   |      |                            |                           |                          |                      |         |                     |                    |                |
| <b>Atascosa County</b>   |      |                            |                           |                          |                      |         |                     |                    |                |
| Countywide   | 08   | 2100CST                    |                           |                          | 0                    | 0       | 100K                | 50K                | Flash Flood    |
|  | 09   | 0900CST                    |                           |                          |                      |         |                     |                    |                |
| General 2 to 3 inch rainfall was indicated across the county with amounts averaging 5 inches along and south of a line along FM140 from the Frio County line to near Charlotte. Parts of this area received up to 11 inches of rain. Considerable damage was reported along FM140.   |      |                            |                           |                          |                      |         |                     |                    |                |
| Very heavy rain redeveloped in the evening hours from Hondo south to Pearsall and southeastward to Pleasanton. General rain amounts averaged near 2 inches with over 5 inches from Frio Town to Charlotte. Within the stretch from Frio Town to Charlotte, areas were indicated with up to 8 inch totals. Flash flooding over these three counties developed in the evening hours and continued just past sunrise next morning.                    |      |                            |                           |                          |                      |         |                     |                    |                |
| <b>TXZ205</b>  |      |                            |                           |                          |                      |         |                     |                    |                |
| <b>Bexar</b>   |      |                            |                           |                          |                      |         |                     |                    |                |
|  | 08   | 2107CST                    |                           |                          | 0                    | 0       |                     |                    | Flood          |
|  | 11   | 0158CST                    |                           |                          |                      |         |                     |                    |                |
| The Medina River crested at 29.89 feet at US 281 South near San Antonio, on September 10 at 0200CST, where flood stage is 20.0 feet.   |      |                            |                           |                          |                      |         |                     |                    |                |
| <b>TXZ219</b>  |      |                            |                           |                          |                      |         |                     |                    |                |
| <b>Frio</b>  |      |                            |                           |                          |                      |         |                     |                    |                |
|  | 09   | 0158CST                    |                           |                          | 0                    | 0       |                     |                    | Flood          |
|  | 12   | 0739CST                    |                           |                          |                      |         |                     |                    |                |
| The Frio River crested at Derby at 12.39 feet on September 9 at 1800CST, where flood stage is 6.0 feet.  |      |                            |                           |                          |                      |         |                     |                    |                |
| <b>TXZ205</b>  |      |                            |                           |                          |                      |         |                     |                    |                |
| <b>Bexar</b>   |      |                            |                           |                          |                      |         |                     |                    |                |
|  | 09   | 0637CST                    |                           |                          | 0                    | 0       |                     |                    | Flood          |
|  | 10   | 0748CST                    |                           |                          |                      |         |                     |                    |                |
| The Medina River crested at 22.19 feet at Somerset on September 9 at 2100CST, where flood stage is 18.0 feet.  |      |                            |                           |                          |                      |         |                     |                    |                |
| <b>Bexar County</b>  |      |                            |                           |                          |                      |         |                     |                    |                |
| Countywide   | 09   | 0700CST                    |                           |                          | 0                    | 0       | 0                   | 0                  | Flash Flood    |
|  |      | 1300CST                    |                           |                          |                      |         |                     |                    |                |
| General 1 inch rainfall with isolated 2 inch totals. No damage was indicated.  |      |                            |                           |                          |                      |         |                     |                    |                |
| <b>Karnes County</b>   |      |                            |                           |                          |                      |         |                     |                    |                |
| Countywide   | 09   | 0830CST                    |                           |                          | 0                    | 0       | 0                   | 0                  | Flash Flood    |
|  |      | 1000CST                    |                           |                          |                      |         |                     |                    |                |
| General 1 inch rainfall with isolated 3 inch totals. No damage was reported.   |      |                            |                           |                          |                      |         |                     |                    |                |
| <b>Wilson County</b>   |      |                            |                           |                          |                      |         |                     |                    |                |
| Countywide   | 09   | 0830CST                    |                           |                          | 0                    | 0       | 0                   | 0                  | Flash Flood    |
|  |      | 1200CST                    |                           |                          |                      |         |                     |                    |                |
| General 1 inch rainfall with isolated 3 inch totals. Little or no damage was indicated.  |      |                            |                           |                          |                      |         |                     |                    |                |
| <b>Comal County</b>  |      |                            |                           |                          |                      |         |                     |                    |                |
| Countywide   | 09   | 1130CST                    |                           |                          | 0                    | 0       | 0                   | 0                  | Flash Flood    |
|  |      | 1300CST                    |                           |                          |                      |         |                     |                    |                |
| General 1 inch rainfall with isolated 3 inch totals. Little or no damage was indicated.  |      |                            |                           |                          |                      |         |                     |                    |                |
| <b>Gonzales County</b>   |      |                            |                           |                          |                      |         |                     |                    |                |
| Countywide   | 09   | 1130CST                    |                           |                          | 0                    | 0       | 0                   | 0                  | Flash Flood    |
|  |      | 1300CST                    |                           |                          |                      |         |                     |                    |                |
| General 1 inch rainfall with isolated 3 inch totals. No damage was reported.   |      |                            |                           |                          |                      |         |                     |                    |                |
| <b>Guadalupe County</b>  |      |                            |                           |                          |                      |         |                     |                    |                |
| Countywide   | 09   | 1130CST                    |                           |                          | 0                    | 0       | 0                   | 0                  | Flash Flood    |
|  |      | 1300CST                    |                           |                          |                      |         |                     |                    |                |
| General 1 inch rainfall with isolated 3 inch totals. Little or no damage was indicated.  |      |                            |                           |                          |                      |         |                     |                    |                |
| In the early morning hours of Monday, September 9, as the remnants of Fay moved into northern Webb County, showers reformed over central areas of South Central Texas and spread southeastward. Rainfall of only 1 to 2 inches, with isolated totals to near 3 inches was enough to redevelop brief flash flooding in the morning from San Antonio eastward to Gonzales and southeast to Karnes City. The flash flooding ended by early afternoon. |      |                            |                           |                          |                      |         |                     |                    |                |
| <b>TXZ221</b>  |      |                            |                           |                          |                      |         |                     |                    |                |
| <b>Wilson</b>  |      |                            |                           |                          |                      |         |                     |                    |                |
|  | 10   | 1805CST                    |                           |                          | 0                    | 0       |                     |                    | Flood          |
|  | 12   | 1336CST                    |                           |                          |                      |         |                     |                    |                |
| The San Antonio River crested at 13.86 feet at Falls City on September 11 at 0302CST, where flood stage is 12.0 feet   |      |                            |                           |                          |                      |         |                     |                    |                |
| <b>Maverick County</b>   |      |                            |                           |                          |                      |         |                     |                    |                |
| South Portion  | 15   | 0500CST                    |                           |                          | 0                    | 0       | 0                   | 0                  | Flash Flood    |
|  |      | 0730CST                    |                           |                          |                      |         |                     |                    |                |
| General 1 to 2 inch rainfall with isolated totals to 3 inches. No damage was indicated.  |      |                            |                           |                          |                      |         |                     |                    |                |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## TEXAS, South Central

### **Zavala County**

**South Portion**      15      0530CST  
0800CST

General 2 inch rainfall with isolated totals to 4 inches. No damage was indicated.

### **Dimmit County**

**Countywide**      15      0600CST  
0830CST

General 2 inch rainfall with isolated totals to 4 inches. No damage was indicated.

### **Frio County**

**South Portion**      15      0600CST  
0800CST

General 1 to 2 inch rainfall with isolated totals to 3 inches. No damage was indicated.

Late on the night of September 14, a weak cold front moved into South Central Texas. Shortly after midnight widespread showers and thunderstorms developed over the southwest sections as an upper level system approached from the west. Rainfall of 1 to 2 inches fell generally south of an Eagle Pass to Pearsall line, with isolated totals of up to 4 inches. Brief flash flooding began near sunrise that morning, ending by the mid morning.

### **Bexar County**

**Countywide**      19      1400CST  
1530CST

General 2 inch rainfall with isolated totals to 4 inches. Around 18 roads were under water due to flooding. Two cars were stalled in high water as they attempted to cross Salado Creek. No other damage was indicated.

### **Guadalupe County**

**Countywide**      19      1400CST  
1530CST

General 1 to 2 inch rainfall with isolated totals to 3 inches. No damage was indicated.

### **Comal County**

**Countywide**      19      1430CST  
1530CST

General 1 to 2 inch rainfall with isolated totals to 3 inches. No damage was indicated.

### **Hays County**

**South Portion**      19      1430CST  
1530CST

General 1 to 2 inch rainfall with isolated totals to 3 inches. No damage was indicated.

On the morning of Thursday, September 19, a line of showers and thunderstorms formed along a cold front that moved southeastward across South Central Texas from the Hill Country. Rainfall from San Antonio to San Marcos to Seguin averaged from 1 to 2 inches with isolated totals to 4 inches. With soils over the area still near saturation, brief flash flooding developed in the early afternoon, ending by late afternoon.

## TEXAS, South Panhandle

### **Lynn County**

**3 NE Tahoka**      13      1900CST      0      0      **Thunderstorm Wind (G51)** <sup>M</sup>

The West Texas Mesonet station northeast of town measured a 59 mph thunderstorm wind gust.

### **Garza County**

**5 SW Graham Chapel**      13      1920CST      0      0      **Thunderstorm Wind (G55)** <sup>M</sup>

The West Texas Mesonet station southwest of town measured a 63 mph thunderstorm wind gust.

### **Bailey County**

**3 W Muleshoe**      18      1605CST      0      0      10K      **Hail (1.00)**

## TEXAS, Southeast

NONE REPORTED.

## TEXAS, West

### **Reeves County**

**17 WNW Balmorhea to  
15 WNW Balmorhea**      13      1430CST  
1440CST      2      75      0      0      0      0      **Tornado (F0)**

A truck driver traveling on Interstate 10 in western Reeves County reported and photographed a tornado. The tornado was located just north of the interstate...a few miles east of the Interstate 10 and Interstate 20 junction.

### **Pecos County**

**Belding**      13      1612CST      0      0      0      0      **Thunderstorm Wind (G57)**

Local law officials reported large trees blown down by thunderstorm winds.

# Storm Data and Unusual Weather Phenomena

September 2002

|  |      |                            |                           |                          |                      |   |                     |   | September 2002                       |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|---|--------------------------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |   | Character of Storm                   |
| TEXAS, West  |      |                            |                           |                          |                      |   |                     |   |                                      |
| Ward County  |      |                            |                           |                          |                      |   |                     |   |                                      |
| 2 S Monahans to<br>1 S Monahans  | 13   | 1630CST<br>1634CST         |                           |                          | 0                    | 0 | 50K                 | 0 | Thunderstorm Wind (G70)              |
| Local media reported that a large transmitter tower was blown down near Monahans by severe thunderstorm winds.   |      |                            |                           |                          |                      |   |                     |   |                                      |
| Loving County  |      |                            |                           |                          |                      |   |                     |   |                                      |
| 9 NW Mentone   | 13   | 1645CST                    |                           |                          | 0                    | 0 | 0                   | 0 | Thunderstorm Wind (G52)              |
| Ector County   |      |                            |                           |                          |                      |   |                     |   |                                      |
| 20 SW Odessa   | 13   | 1710CST<br>1715CST         |                           |                          | 0                    | 0 | 30K                 | 0 | Thunderstorm Wind (G70)              |
| Two residences along Interstate 20 in southwest Ector County received damage from severe thunderstorm winds. The roof of a mobile home was destroyed, windows were broken, and a barn was destroyed.   |      |                            |                           |                          |                      |   |                     |   |                                      |
| Winkler County   |      |                            |                           |                          |                      |   |                     |   |                                      |
| Kermit   | 13   | 1715CST                    |                           |                          | 0                    | 0 | 10K                 | 0 | Thunderstorm Wind (G65)              |
| A well developed bow echo developed and moved east across Winkler County. The Kermit PD reported damaging winds up to 75 MPH. Large trees were blown down along with power poles. A few tin roofs received minor damage.   |      |                            |                           |                          |                      |   |                     |   |                                      |
| Borden County  |      |                            |                           |                          |                      |   |                     |   |                                      |
| 2 SE Gail  | 13   | 1720CST                    |                           |                          | 0                    | 0 | 0                   | 0 | Thunderstorm Wind (G56) <sup>M</sup> |
| A severe thunderstorm wind gust was measured by the Texas Mesonet.   |      |                            |                           |                          |                      |   |                     |   |                                      |
| Ector County   |      |                            |                           |                          |                      |   |                     |   |                                      |
| 8 W Odessa to<br>6 W Odessa  | 13   | 1725CST<br>1735CST         |                           |                          | 0                    | 0 | 150K                | 0 | Thunderstorm Wind (G70)              |
| Numerous reports of damaging winds were received from the area around West Odessa. Although reports indicated wind speeds ranging from 80 to 100 MPH, a NWS damage survey concluded that maximum wind gusts were likely 80 MPH. One mobile home was completely destroyed. Seven homes received what was termed major damage, including severe roof or siding damage. Five additional homes had minor damage, restricted to mainly broken windows. Large trees and power poles were also blown down. No injuries were reported. |      |                            |                           |                          |                      |   |                     |   |                                      |
| Ector County   |      |                            |                           |                          |                      |   |                     |   |                                      |
| 8 W Odessa   | 13   | 1735CST<br>1740CST         |                           |                          | 0                    | 0 | 0                   | 0 | Hail (1.75)                          |
| Several reports of large hail ranging from quarter to golfball size were received from West Odessa.  |      |                            |                           |                          |                      |   |                     |   |                                      |
| Presidio County  |      |                            |                           |                          |                      |   |                     |   |                                      |
| Presidio   | 13   | 1740CST                    |                           |                          | 0                    | 0 | 0                   | 0 | Thunderstorm Wind (G61)              |
| Presidio County  |      |                            |                           |                          |                      |   |                     |   |                                      |
| Presidio   | 13   | 1740CST<br>1800CST         |                           |                          | 0                    | 0 | 0                   | 0 | Urban/Sml Stream Fld                 |
| Minor street flooding was reported in the city.  |      |                            |                           |                          |                      |   |                     |   |                                      |
| Midland County   |      |                            |                           |                          |                      |   |                     |   |                                      |
| 10 W Midland   | 13   | 1750CST                    |                           |                          | 0                    | 0 | 0                   | 0 | Thunderstorm Wind (G52)              |
| Andrews County   |      |                            |                           |                          |                      |   |                     |   |                                      |
| 10 S Andrews   | 13   | 1752CST                    |                           |                          | 0                    | 0 | 0                   | 0 | Thunderstorm Wind (G52)              |
| Reported on Highway 385.   |      |                            |                           |                          |                      |   |                     |   |                                      |
| Reeves County  |      |                            |                           |                          |                      |   |                     |   |                                      |
| 2 SE Pecos   | 13   | 1800CST                    |                           |                          | 0                    | 0 | 0                   | 0 | Thunderstorm Wind (G56) <sup>M</sup> |
| A severe thunderstorm wind gust of 64 MPH was measured at the Pecos Municipal Airport.   |      |                            |                           |                          |                      |   |                     |   |                                      |
| Midland County   |      |                            |                           |                          |                      |   |                     |   |                                      |
| Midland  | 13   | 1809CST                    |                           |                          | 0                    | 0 | 0                   | 0 | Thunderstorm Wind (G52)              |
| Severe thunderstorms resulted in 60 MPH winds at the Scarborough Sports Complex just before a high school football game was scheduled to begin. No injuries or damage was reported.  |      |                            |                           |                          |                      |   |                     |   |                                      |
| Ector County   |      |                            |                           |                          |                      |   |                     |   |                                      |
| Odessa   | 13   | 1810CST<br>1815CST         |                           |                          | 0                    | 0 | 15K                 | 0 | Thunderstorm Wind (G61)              |
| A secondary area of severe winds developed, and moved into the Odessa area. These winds were associated with a broad area of weak convection which developed in the wake of the more significant severe thunderstorm previously listed. This event resulted in damaging winds affecting the Permian Basin Fair. Windows were blown out of approximately ten vehicles, and several tents were blown down. No injuries were reported.  |      |                            |                           |                          |                      |   |                     |   |                                      |
| Ector County   |      |                            |                           |                          |                      |   |                     |   |                                      |
| 5 ENE Gardendale   | 13   | 1827CST                    |                           |                          | 0                    | 0 | 0                   | 0 | Thunderstorm Wind (G52)              |
| Midland County   |      |                            |                           |                          |                      |   |                     |   |                                      |
| 13 NW Midland  | 13   | 1827CST                    |                           |                          | 0                    | 0 | 0                   | 0 | Thunderstorm Wind (G52)              |

# Storm Data and Unusual Weather Phenomena

September 2002

|   |           |                                  |                           |                          |                      |          |                     |          | September 2002                              |
|---|-----------|----------------------------------|---------------------------|--------------------------|----------------------|----------|---------------------|----------|---|
| Location  | Date      | Time<br>Local/<br>Standard       | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |          | Estimated<br>Damage |          | Character of Storm                          |
|   |           |                                  |                           |                          | Killed               | Injured  | Property            | Crops    |   |
| <b>TEXAS, West</b>  |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Martin County</b>  |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Lenorah</b>  | <b>13</b> | <b>1830CST</b>                   |                           |                          | <b>0</b>             | <b>0</b> | <b>0</b>            | <b>0</b> | <b>Thunderstorm Wind (G52)</b>              |
| <b>Pecos County</b>   |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Ft Stockton</b>  | <b>13</b> | <b>1837CST</b><br><b>1850CST</b> |                           |                          | <b>0</b>             | <b>0</b> | <b>10K</b>          | <b>0</b> | <b>Thunderstorm Wind (G70)</b> <sup>M</sup> |
| The ASOS at Fort Stockton measured a 58 MPH wind gust. Numerous reports of winds up to 80 MPH were received in the following fifteen minutes. Some of the reports indicated damage to large trees, power poles, and road signs.   |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Ector County</b>   |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Odessa</b>   | <b>13</b> | <b>1840CST</b><br><b>1920CST</b> |                           |                          | <b>0</b>             | <b>0</b> | <b>5K</b>           | <b>0</b> | <b>Urban/Sml Stream Fld</b>                 |
| Moderate street flooding was reported in parts of Odessa, resulting in at least one stalled car. No injuries were reported.   |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Borden County</b>  |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>17 NE Gail</b>   | <b>13</b> | <b>2035CST</b>                   |                           |                          | <b>0</b>             | <b>0</b> | <b>0</b>            | <b>0</b> | <b>Thunderstorm Wind (G58)</b> <sup>M</sup> |
| A severe thunderstorm wind gust was measured by the Texas Mesonet.<br>The afternoon and evening of the 13th brought an active severe weather situation to West Texas. The primary severe weather mode was multicell storm structures with damaging winds. However, a few storms exhibited supercellular characteristics, and one tornado was documented in western Reeves County. Large hail to the size of golfballs was also reported. The most significant damage reports were received from the West Odessa and Odessa areas in Ector County. Winds up to 100 MPH were reported with the first severe storm to impact that area, but those reports could not be substantiated by a NWS damage survey. A second complex of storms affecting the area resulted in 70 MPH winds. Damage was also reported from thunderstorm winds in Kermit and Fort Stockton. |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Ector County</b>   |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>2 N Odessa to<br/>    8 W Odessa</b>   | <b>14</b> | <b>1810CST</b><br><b>1815CST</b> |                           |                          | <b>0</b>             | <b>0</b> | <b>0</b>            | <b>0</b> | <b>Hail (1.25)</b>                          |
| Several reports of large hail were received from the Odessa area...as a severe thunderstorm developed and moved south. The storm was short lived, but produced hail to the size of half dollars.  |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Pecos County</b>   |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Imperial</b>   | <b>14</b> | <b>1830CST</b>                   | <b>0.1</b>                | <b>50</b>                | <b>0</b>             | <b>0</b> | <b>0</b>            | <b>0</b> | <b>Tornado (F0)</b>                         |
| Officials in Pecos County reported a brief tornado near the city of Imperial. No damage or injuries were reported. The tornado formed as an outflow boundary interacted with a severe storm.  |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Presidio County</b>  |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Presidio</b>   | <b>15</b> | <b>1900CST</b><br><b>1925CST</b> |                           |                          | <b>0</b>             | <b>0</b> | <b>0</b>            | <b>0</b> | <b>Thunderstorm Wind (G52)</b>              |
| <b>Borden County</b>  |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>17 NE Gail</b>   | <b>18</b> | <b>1935CST</b>                   |                           |                          | <b>0</b>             | <b>0</b> | <b>0</b>            | <b>0</b> | <b>Thunderstorm Wind (G54)</b> <sup>M</sup> |
| A severe thunderstorm wind gust was measured by the Texas Mesonet.  |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Midland County</b>   |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Midland to<br/>    Greenwood</b>   | <b>18</b> | <b>2025CST</b><br><b>2050CST</b> |                           |                          | <b>0</b>             | <b>0</b> | <b>100K</b>         | <b>0</b> | <b>Thunderstorm Wind (G65)</b>              |
| Damaging thunderstorm winds were reported from the city of Midland to Greenwood. A total of nineteen power poles were blown down by the winds. The hardest hit areas were near Greenwood, where a NWS damage survey indicated that several weakly constructed homes received minor roof damage, along with one business. In addition, windows were blown out of seven vehicles in a church parking lot. No injuries were reported.  |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Howard County</b>  |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>5 SE Big Spring</b>  | <b>18</b> | <b>2050CST</b><br><b>2100CST</b> |                           |                          | <b>0</b>             | <b>0</b> | <b>0</b>            | <b>0</b> | <b>Hail (0.75)</b>                          |
| <b>Reeves County</b>  |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>12 N Pecos to<br/>    Pecos</b>  | <b>18</b> | <b>2120CST</b><br><b>2130CST</b> |                           |                          | <b>0</b>             | <b>0</b> | <b>10K</b>          | <b>0</b> | <b>Thunderstorm Wind (G70)</b>              |
| Local officials reported severe thunderstorm wind gusts which blew down powerlines along Highway 285 from 12 miles north of Pecos to the city.  |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Glasscock County</b>   |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Countywide</b>   | <b>18</b> | <b>2200CST</b>                   |                           |                          | <b>0</b>             | <b>0</b> | <b>35K</b>          | <b>0</b> | <b>Thunderstorm Wind (G70)</b>              |
| The local utility company reported that powerlines were blown down across a large part of Glasscock County.   |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Martin County</b>  |           |                                  |                           |                          |                      |          |                     |          |   |
| <b>Stanton</b>  | <b>18</b> | <b>2200CST</b>                   |                           |                          | <b>0</b>             | <b>0</b> | <b>0</b>            | <b>0</b> | <b>Thunderstorm Wind (G56)</b> <sup>M</sup> |
| Thunderstorms producing damaging winds affected parts of the Permian Basin and the Trans Pecos region. The most significant damage was in Midland County. Elsewhere, the damage was restricted to mainly power lines and poles.   |           |                                  |                           |                          |                      |          |                     |          |   |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## TEXAS, Western North

|                       |    |         |                          |  |   |   |    |  |                         |
|-----------------------|----|---------|--------------------------|--|---|---|----|--|-------------------------|
| <b>Knox County</b>    |    |         |                          |  |   |   |    |  |                         |
| 5 W Benjamin          | 18 | 1710CST |                          |  | 0 | 0 | 2K |  | Thunderstorm Wind       |
|                       |    |         | Power poles were downed. |  |   |   |    |  |                         |
| <b>Knox County</b>    |    |         |                          |  |   |   |    |  |                         |
| 3 E Vera              | 18 | 1755CST |                          |  | 0 | 0 |    |  | Thunderstorm Wind (G52) |
| <b>Baylor County</b>  |    |         |                          |  |   |   |    |  |                         |
| 5 NE Seymour          | 18 | 1825CST |                          |  | 0 | 0 |    |  | Thunderstorm Wind (G52) |
| <b>Baylor County</b>  |    |         |                          |  |   |   |    |  |                         |
| 5 NE Seymour          | 18 | 1830CST |                          |  | 0 | 0 |    |  | Thunderstorm Wind (G52) |
| <b>Archer County</b>  |    |         |                          |  |   |   |    |  |                         |
| 5 N Mankins           | 18 | 1928CST |                          |  | 0 | 0 |    |  | Hail (0.75)             |
| <b>Archer County</b>  |    |         |                          |  |   |   |    |  |                         |
| Mankins               | 18 | 1935CST |                          |  | 0 | 0 |    |  | Hail (0.88)             |
| <b>Wichita County</b> |    |         |                          |  |   |   |    |  |                         |
| 4 SW Wichita Falls    | 18 | 2005CST |                          |  | 0 | 0 |    |  | Hail (0.88)             |

## UTAH, East

**UTZ022>025-027>029** Southeast Utah - Eastern Uinta Mountains - Eastern Uinta Basin - Tavaputs Plateau - Grand Flat And Arches - La Sal & Abajo Mountains - Canyonlands / Natural Bridges

01 0000MST 0 0 Drought  
30 2359MST

Extreme to exceptional drought continued across the eastern quarter of Utah through the month of September. However, periods of rainfall reduced the usage of water across the area, while decreasing the risk of wildfires. See the October 2002 Storm Data publication for a continuation of the drought in the eastern quarter of Utah.

### Grand County

Moab to 07 1530MST 0 0 2K Thunderstorm Wind (G60)  
3 NNE Moab 1540MST

A steel framed sign was torn off the Moab Valley Inn and several tiles were blown off the roof. Many trees were blown over or snapped off in town. A large number of Tamarisks were ripped from the shoreline of the Colorado River and blown onto Highway 128, temporarily blocking the road.

### San Juan County

1 W Goulding to 07 1530MST 0 0 50K Flash Flood  
2 E Goulding 1610MST

Flash flooding washed out most of the temporary road repairs which had been constructed since the 08-29-02 flash flood. A channel 6 to 8 feet deep was gouged out along a section of Highway 63, exposing an apparent gas pipeline.

### San Juan County

Mexican Hat 07 1540MST 0 0 2K Urban/Sml Stream Fld  
1615MST

Heavy rains resulted in minor flooding which caused rocks to slide down onto Highway 163. One large boulder was too large to move with heavy equipment and had to be blasted off the highway.

### San Juan County

7 SSE Eastland to 07 1630MST 0 0 Thunderstorm Wind (G70)  
7 S Eastland 1640MST

The roof of a 35 foot high granary was blown 100 feet away over the top of a power line and over another granary. A large number of 8 inch diameter pinyon pine trees in the area were snapped off just above the ground.

### San Juan County

Eastland 07 1640MST 0 0 10K Urban/Sml Stream Fld  
1700MST

Nearly an inch of rain was measured within 20 minutes on a farm in the Eastland area. Another nearby farmer measured 1.98 inches of rain within an hour. Extensive soil erosion and crop wash out occurred.

### San Juan County

29 WNW La Sal Jct to 07 1645MST 0 0 80K Flash Flood  
35 WNW La Sal Jct 1800MST

Numerous road and trail washouts occurred in the backcountry of Canyonlands National Park. At approximately 1700 MST a family of four was driving a Humvee up Taylor Canyon when water rose to 10 feet deep and carried their vehicle four miles down the wash. The family was able to escape from the vehicle and swim safely to shore. The normally dry wash was running 300 feet wide during the flash flood. The Humvee was totalled.

### San Juan County

Bluff 07 1700MST 0 0 Urban/Sml Stream Fld  
1740MST

Heavy rain produced rockslides on roadways and streams overflowed onto roads.

# Storm Data and Unusual Weather Phenomena

September 2002

|   |      |                            |                           |                          |                      |   |                     |     | September 2002                       |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|-----|--------------------------------------|
| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |     | Character of Storm                   |
|   |      |                            |                           |                          |                      |   |                     |     |                                      |
| <b><u>UTAH, East</u></b>  |      |                            |                           |                          |                      |   |                     |     |                                      |
| <b>San Juan County</b><br>5 SW La Sal   | 12   | 1245MST<br>1255MST         |                           |                          | 0                    | 0 |                     |     | Hail (0.75)                          |
|   |      |                            |                           |                          |                      |   |                     |     |                                      |
| <b>San Juan County</b><br>4 SE Monticello   | 12   | 1300MST<br>1400MST         |                           |                          | 0                    | 0 |                     |     | Urban/Sml Stream Fld                 |
| Heavy rain caused minor flooding along Montezuma Creek in Montezuma Canyon.   |      |                            |                           |                          |                      |   |                     |     |                                      |
| <b>San Juan County</b><br>24 WNW La Sal Jct   | 12   | 1630MST<br>1730MST         |                           |                          | 0                    | 0 | 20K                 |     | Flash Flood                          |
| Heavy rain caused flash flooding and mud slides to partially bury vehicles and a camper in Canyonlands National Park.   |      |                            |                           |                          |                      |   |                     |     |                                      |
| <b>Grand County</b><br>7 SW Moab to<br>7 WSW Moab   | 12   | 1630MST<br>1730MST         |                           |                          | 0                    | 0 | 25K                 |     | Flash Flood                          |
| Flash flooding washed out sections of Potash Road and Long Canyon Road, as well as a section of railroad tracks along Highway 279.  |      |                            |                           |                          |                      |   |                     |     |                                      |
| <b>San Juan County</b><br>Bluff   | 12   | 1745MST<br>1845MST         |                           |                          | 0                    | 0 |                     |     | Urban/Sml Stream Fld                 |
| Heavy rain caused minor street flooding in town.  |      |                            |                           |                          |                      |   |                     |     |                                      |
| <b>Grand County</b><br>(Cny)Canyonlands Fld   | 16   | 1929MST<br>1935MST         |                           |                          | 0                    | 0 |                     |     | Thunderstorm Wind (G51) <sup>M</sup> |
| <b>Grand County</b><br>(Cny)Canyonlands Fld   | 29   | 1400MST<br>1415MST         |                           |                          | 0                    | 0 |                     |     | Thunderstorm Wind (G55)              |
| Strong thunderstorm winds lowered visibilities to near zero in blowing dust at the Canyonlands Airport. The strong winds also picked up debris from a trash pile west of the airport and sent sheets of metal and other objects sailing over the airport. A lightning strike knocked out power to the ASOS equipment shortly before the winds hit the airport. Therefore, the winds were estimated. |      |                            |                           |                          |                      |   |                     |     |                                      |
| <b>Grand County</b><br>Crescent Jct to<br>Westwater   | 29   | 1400MST<br>1500MST         |                           |                          | 0                    | 0 |                     |     | Flash Flood                          |
| Heavy rains caused flash flooding estimated to be at least 6 feet deep through drainages running under Interstate 70. Several places still had 4 feet of standing water remaining after the flash flooding subsided.  |      |                            |                           |                          |                      |   |                     |     |                                      |
| <b><u>UTAH, West and Central</u></b>  |      |                            |                           |                          |                      |   |                     |     |                                      |
| <b>Iron County</b><br>Cedar City  | 06   | 1405MST<br>1410MST         |                           |                          | 0                    | 0 | 0                   | 0   | Hail (0.75)                          |
| A severe thunderstorm brought heavy rain and 3/4 inch hail to portions of Cedar City.   |      |                            |                           |                          |                      |   |                     |     |                                      |
| <b>Washington County</b><br>Zion National Park  | 06   | 1445MST<br>1645MST         |                           |                          | 0                    | 0 | 0                   | 0   | Flash Flood                          |
| Heavy downpours produced localized flash flooding of small creeks in the Zion National Park area. No damage was reported.   |      |                            |                           |                          |                      |   |                     |     |                                      |
| <b>Salt Lake County</b><br>Riverton to<br>Bluffdale   | 06   | 1730MST<br>1930MST         |                           |                          | 0                    | 0 | 200K                | 0   | Flash Flood                          |
| <b>Utah County</b><br>Alpine to<br>Pleasant Grove   | 06   | 1730MST<br>1930MST         |                           |                          | 0                    | 0 | 200K                | 0   | Flash Flood                          |
| Heavy thunderstorm downpours produced localized flash flooding in Southern Salt Lake and portions of Utah counties. The rain produced a mudslide in Alpine, causing extensive damage to one home. About 20 homes in Pleasant Grove reported basement flooding. A canal above Bluffdale overflowed, sending a wall of water and mud into a subdivision, flooding at least 10 homes.                  |      |                            |                           |                          |                      |   |                     |     |                                      |
| <b>Utah County</b><br>Pleasant Grove  | 06   | 1730MST<br>1800MST         |                           |                          | 0                    | 0 | 0                   | 0   | Hail (0.88)                          |
| A severe thunderstorm produced nickle-size hail and very heavy downpours in the Pleasant Grove area. Rainfall amounts of .78 inches in 15 minutes produced street flooding.   |      |                            |                           |                          |                      |   |                     |     |                                      |
| <b>Washington County</b><br>Toquerville   | 06   | 1845MST<br>2045MST         |                           |                          | 0                    | 0 | 10K                 | 10K | Flash Flood                          |
| Heavy rains, 1.00 inch in 7 minutes, in Toquerville produced flash flooding of a farmer's field and flooding of his barn.   |      |                            |                           |                          |                      |   |                     |     |                                      |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002  |      |                            |                           |                          |                      |   |                     |      |                                      |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|------|--------------------------------------|
| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |      | Character of Storm                   |
| UTAH, West and Central  |      |                            |                           |                          |                      |   |                     |      |                                      |
| Tooele County   |      |                            |                           |                          |                      |   |                     |      |                                      |
| Tooele  | 06   | 1930MST                    |                           |                          | 0                    | 2 | 2K                  | 0    | Tstm Wind/Hail                       |
| Two people were seriously injured when strong thunderstorm winds toppled a scissor lift. The individuals were using the lift to film a football game, and fell about 25 feet to the ground. |      |                            |                           |                          |                      |   |                     |      |                                      |
| Box Elder County  |      |                            |                           |                          |                      |   |                     |      |                                      |
| Snowville   | 06   | 2000MST                    |                           |                          | 0                    | 0 | 0                   | 0    | Hail (0.75)                          |
| A severe thunderstorm dumped heavy rain and 3/4 inch hail on the town of Snowville.   |      |                            |                           |                          |                      |   |                     |      |                                      |
| Kane County   |      |                            |                           |                          |                      |   |                     |      |                                      |
| Bullfrog  | 07   | 1316MST<br>1320MST         |                           |                          | 0                    | 0 | 0                   | 0    | Hail (0.75)                          |
| Kane County   |      |                            |                           |                          |                      |   |                     |      |                                      |
| Bullfrog  | 07   | 1316MST                    |                           |                          | 0                    | 0 | 0                   | 0    | Thunderstorm Wind (G60) <sup>M</sup> |
| A severe thunderstorm produced 3/4 inch hail and 69 mph (60 kts) wind gusts at Bullfrog Marina on Lake Powell.  |      |                            |                           |                          |                      |   |                     |      |                                      |
| Sanpete County  |      |                            |                           |                          |                      |   |                     |      |                                      |
| Centerfield   | 08   | 1244MST<br>1250MST         | 0.2                       | 10                       | 0                    | 0 | 0                   | 0    | Tornado (F0)                         |
| An F0 tornado was spotted on the ground for a short time over open country 5 miles NNE of Centerfield.  |      |                            |                           |                          |                      |   |                     |      |                                      |
| Sanpete County  |      |                            |                           |                          |                      |   |                     |      |                                      |
| Manti   | 08   | 1250MST<br>1305MST         | 2.7                       | 270                      | 0                    | 0 | 2M                  | 100K | Tornado (F2)                         |



*A photo of an F2 tornado taken from a golf course as it moved through the town of Manti.*

An F2 tornado began one mile south-southwest of Manti and moved northeast through Southeast Manti. The first mile of the tornado path was across open land, however the tornado produced some remarkable damage at the start. A 10X12 foot pioneer building was lifted, rotated 90 degrees, and moved 8 feet before being dropped back to the ground. At the south end of Manti, the tornado struck the Anderson Lumber business and did substantial damage. A 40 foot semi-trailer, loaded with insulation, was lifted and thrown onto it's side approximately 35 to 40 feet away. A large amount of debris, along with a 10X10 foot wooden shed, was thrown across Highway 89 and over the hill some 200 to 300 feet away. The wide swath of the tornado did considerable damage as it moved through the residential area in Southeast Manti. As the tornado exited the residential area, where some of the heaviest damage occurred, a 26 foot camp trailer was lifted and thrown to the west-northwest some 150 to 200 feet and disintegrated. The tornado continued across open farmland another half a mile or so before dissipating near the mountains. It has been determined that this was a high-end F2 tornado, with winds as high as 157 mph. The distance traveled was 2.75 miles, and the width was 800 feet. Time on the ground was approximately 15 minutes. Estimated damage is around \$2,000,000, but could still go higher. Amazingly, there were no injuries.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## UTAH, West and Central

### Sanpete County

#### Manti

08 1250MST 0 0 0 0 Hail (1.75)  
1255MST

The storm that produced the F2 tornado in Manti, also dropped 1 3/4 inch (reported as apricot-size) hail on the town.

### Sanpete County

#### Ephraim

12 1055MST 0.1 10 0 0 0 0 Tornado (F0)  
1056MST

A small tornado (F0) was observed just west of Ephraim in Sanpete County. The tornado moved slowly to the northeast over open country before dissipating. This tornado remained on the ground for only a few seconds, but the funnel cloud was visible for about 10 minutes.

### Wayne County

#### Hanksville

12 1330MST 0.2 20 0 0 0 0 Tornado (F0)  
1335MST

A small tornado (F0) was observed 20 miles southeast of Hanksville in Wayne County. It was on the ground over open country for a short time, and debris from the ground was observed rising before the funnel dissipated.

### Wayne County

#### Caineville

12 1410MST 0 0 0 0 Flash Flood  
1510MST

Heavy rains produced flash flooding over State Route 24 near Cainville.

### Kane County

#### Bullfrog

12 1430MST 0 0 10K 0 Flash Flood  
1630MST

Heavy rains produced flash flooding in the Bullfrog area of Lake Powell. Sewer lines were broke, and water and mud was sent into the campgrounds.

### Carbon County

#### Sunnyside

12 1600MST 0 0 500K 0 Flash Flood  
1800MST

A cloudburst (1.48 inches in an hour) produced flash flooding in Sunnyside. City Hall was flooded with water up to 3 feet deep, and numerous homes and businesses were flooded.

### Utah County

#### Santaquin

12 1800MST 0 0 3M 100K Flash Flood  
2330MST

Heavy rains over several days caused flash flooding and mudslides below a burn area in Santaquin. The rain also caused a canal to overflow its banks in the same area, making conditions even worse. An estimated 3 million dollars damage was done to to about 40 homes and several vehicles as mudslides up to 7 feet deep moved down the hillside. No injuries were reported.

### Box Elder County

#### Kelton

12 1800MST 0 0 0 0 Funnel Cloud  
1815MST

Public reports to media outlets indicated about 4 funnel clouds from a thunderstorm at the north end of the Great Salt Lake.

### Tooele County

#### Clive

16 1005MST 0 0 0 0 Thunderstorm Wind (G63) <sup>M</sup>

A severe thunderstorm produced 72 mph (63 kts) wind gusts 23 miles west of Clive.

### Box Elder County

#### Lakeside

16 1030MST 0 0 0 0 Thunderstorm Wind (G63) <sup>M</sup>

A thunderstorm wind gust of 73 mph (63 kts) was measured at a station 9 miles north of Lakeside.

### Beaver County

#### Milford

16 1530MST 0 0 0 0 Thunderstorm Wind (G56) <sup>M</sup>

Thunderstorm winds were clocked at 64 mph (56 kts) at Brimstone Reservoir, 21 miles WSW of Milford.

### Duchesne County

#### Mountain Home

17 2015MST 0 0 1K 1K Thunderstorm Wind (G52)

Several trees were blown down in Mountain Home, when a severe thunderstorm brought wind gusts estimated at 60 mph (52 kts).

## VERMONT, North and Central

### Chittenden County

#### Jericho

11 0900EST 0 0 Tstm Wind/Hail  
1000EST

A cold front moved across Vermont which resulted in widespread rainfall on September 11th. In Chittenden county, a morning thunderstorm resulted in pea size hail, wind gust to 46 mph and locally heavy rainfall in the town of Jericho.

### Franklin County

#### Georgia Center to St Albans

15 0530EST 0 0 Tstm Wind/Hail  
0600EST

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## **VERMONT, North and Central**

Heavy rain associated with the remnants of Tropical Storm Hannah moved across Vermont during September 14th and 15th. In the Vermont county of Franklin, pea size hail and very heavy rain was reported during the early morning of the 15th between Georgia Center and St Albans, Vermont.

### **Addison County**

|            |    |         |  |  |   |   |  |  |            |
|------------|----|---------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|            | 28 | 0100EST |  |  |   |   |  |  |            |

### **Chittenden County**

|            |    |         |  |  |   |   |  |  |            |
|------------|----|---------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|            | 28 | 0100EST |  |  |   |   |  |  |            |

### **Grand Isle County**

|            |    |         |  |  |   |   |  |  |            |
|------------|----|---------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|            | 28 | 0100EST |  |  |   |   |  |  |            |

The remnants of Tropical Storm Isidore moved northeast from the Ohio Valley on Friday, September 27th into New York state during the afternoon of the 27th and across central Vermont during Friday night, September 27th. Heavy rain accompanied this system with generally between 2 and 2 1/2 inches of rainfall reported. Amounts were locally higher in the mountains. Earlier in the month, September 14-15, the remnants of Tropical Storm Hannah resulted in rainfall of around an inch across the same area. No flooding was reported with either event.

### **Caledonia County**

|            |    |         |  |  |   |   |  |  |            |
|------------|----|---------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|            | 28 | 0100EST |  |  |   |   |  |  |            |

### **Essex County**

|            |    |         |  |  |   |   |  |  |            |
|------------|----|---------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|            | 28 | 0100EST |  |  |   |   |  |  |            |

### **Franklin County**

|            |    |         |  |  |   |   |  |  |            |
|------------|----|---------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|            | 28 | 0100EST |  |  |   |   |  |  |            |

### **Lamoille County**

|            |    |         |  |  |   |   |  |  |            |
|------------|----|---------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|            | 28 | 0100EST |  |  |   |   |  |  |            |

### **Orange County**

|            |    |         |  |  |   |   |  |  |            |
|------------|----|---------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|            | 28 | 0100EST |  |  |   |   |  |  |            |

### **Orleans County**

|            |    |         |  |  |   |   |  |  |            |
|------------|----|---------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|            | 28 | 0100EST |  |  |   |   |  |  |            |

### **Rutland County**

|            |    |         |  |  |   |   |  |  |            |
|------------|----|---------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|            | 28 | 0100EST |  |  |   |   |  |  |            |

### **Windsor County**

|            |    |         |  |  |   |   |  |  |            |
|------------|----|---------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|            | 28 | 0100EST |  |  |   |   |  |  |            |

The remnants of Tropical Storm Isidore moved northeast from the Ohio Valley on Friday, September 27th into New York state during the afternoon of the 27th and across central Vermont during Friday night, September 27th. Heavy rain accompanied this system with generally between 1 1/2 and 2 inches of rainfall reported. Amounts were locally higher in the mountains. Earlier in the month, September 14-15, the remnants of Tropical Storm Hannah resulted in rainfall of around an inch across the same area. No flooding was reported with either event.

### **Addison County**

|            |    |         |  |  |   |   |  |  |            |
|------------|----|---------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|            | 28 | 0100EST |  |  |   |   |  |  |            |

### **Chittenden County**

|            |    |         |  |  |   |   |  |  |            |
|------------|----|---------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|            | 28 | 0100EST |  |  |   |   |  |  |            |

### **Grand Isle County**

|            |    |         |  |  |   |   |  |  |            |
|------------|----|---------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|            | 28 | 0100EST |  |  |   |   |  |  |            |

### **Washington County**

|            |    |         |  |  |   |   |  |  |            |
|------------|----|---------|--|--|---|---|--|--|------------|
| Countywide | 27 | 1300EST |  |  | 0 | 0 |  |  | Heavy Rain |
|            | 28 | 0100EST |  |  |   |   |  |  |            |

The remnants of Tropical Storm Isidore moved northeast from the Ohio Valley on Friday, September 27th into New York state during the afternoon of the 27th and across central Vermont during Friday night, September 27th. Heavy rain accompanied this system with generally between 1 1/2 and 2 1/2 inches of rainfall reported. Amounts were locally higher in the mountains. Earlier in

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## VERMONT, North and Central

the month, September 14-15, the remnants of Tropical Storm Hannah resulted in rainfall of around an inch across the same area. No flooding was reported with either event.

## VERMONT, South

NONE REPORTED.

## VIRGIN ISLANDS

### St. Croix County

|            |    |                    |  |  |   |   |    |  |                |
|------------|----|--------------------|--|--|---|---|----|--|----------------|
| Countywide | 16 | 0000AST<br>0600AST |  |  | 0 | 0 | 5K |  | Tstm Wind/Hail |
|------------|----|--------------------|--|--|---|---|----|--|----------------|

### St. Thomas/St. John & Islands County

|            |    |                    |  |  |   |   |     |  |                |
|------------|----|--------------------|--|--|---|---|-----|--|----------------|
| Countywide | 16 | 0000AST<br>0600AST |  |  | 0 | 0 | 10K |  | Tstm Wind/Hail |
|------------|----|--------------------|--|--|---|---|-----|--|----------------|

A strong tropical wave caused very heavy rain and strong gusty winds over the Virgin Islands. This rainfall and wind caused damage to two generators and the power was cut off to all of St. Thomas and St John as well as phone lines. In St. Croix a transformer blew off in Frederiksted during a heavy downpour and many residents were without power.

### VIZ002

#### St. Croix

|    |                    |  |  |   |   |  |  |  |              |
|----|--------------------|--|--|---|---|--|--|--|--------------|
| 30 | 0600AST<br>2000AST |  |  | 0 | 0 |  |  |  | Volcanic Ash |
|----|--------------------|--|--|---|---|--|--|--|--------------|

A volcanic eruption occurred over the island of Montserrat in the Lesser Antilles, southeast of the local region. Southeast winds carried a thin ash cloud toward the Virgin Islands during the morning. This cloud moved away from the area in the late afternoon and dissipated.

## VIRGINIA, East

### Chesterfield County

|              |    |         |  |  |   |   |    |  |                   |
|--------------|----|---------|--|--|---|---|----|--|-------------------|
| 1 SW Bensley | 04 | 2000EST |  |  | 0 | 0 | 2K |  | Thunderstorm Wind |
|--------------|----|---------|--|--|---|---|----|--|-------------------|

Few trees down in Drewrys Bluff area.

### Chesapeake (C)

|             |    |         |  |  |   |   |  |  |             |
|-------------|----|---------|--|--|---|---|--|--|-------------|
| Bowers Hill | 04 | 2110EST |  |  | 0 | 0 |  |  | Hail (0.75) |
|-------------|----|---------|--|--|---|---|--|--|-------------|

## VIRGINIA, Extreme Southwest

NONE REPORTED.

## VIRGINIA, North

### Fauquier County

|               |    |         |  |  |   |   |    |  |                   |
|---------------|----|---------|--|--|---|---|----|--|-------------------|
| 1 NW Bealeton | 27 | 1552EST |  |  | 0 | 0 | 2K |  | Thunderstorm Wind |
|---------------|----|---------|--|--|---|---|----|--|-------------------|

Large trees were downed at the intersection of Route 17 and 28.

### Manassas (C)

|          |    |         |  |  |   |   |  |  |              |
|----------|----|---------|--|--|---|---|--|--|--------------|
| Manassas | 27 | 1618EST |  |  | 0 | 0 |  |  | Funnel Cloud |
|----------|----|---------|--|--|---|---|--|--|--------------|

A funnel cloud was reported by a trained spotter.

### Clarke County

|            |    |         |  |  |   |   |    |  |                   |
|------------|----|---------|--|--|---|---|----|--|-------------------|
| Berryville | 27 | 1710EST |  |  | 0 | 0 | 2K |  | Thunderstorm Wind |
|------------|----|---------|--|--|---|---|----|--|-------------------|

Trees were downed onto power lines.

Scattered thunderstorms with high winds moved through between 6:30 and 8:30 PM EDT. In Clarke County, trees were felled onto power lines near Berryville. In Fauquier County, large trees were downed at the intersection of Routes 17 and 28 one mile northwest of Bealeton. In Prince William County, a trained spotter reported a funnel cloud over Manassas.

## VIRGINIA, Northwest

NONE REPORTED.

## VIRGINIA, Southwest

### Amherst County

|              |    |                    |  |  |   |   |   |  |             |
|--------------|----|--------------------|--|--|---|---|---|--|-------------|
| 8 NE Amherst | 03 | 1615EST<br>1645EST |  |  | 0 | 0 | 0 |  | Flash Flood |
|--------------|----|--------------------|--|--|---|---|---|--|-------------|

Thunderstorms rains on the 3rd washed out a gravel road and flooded and closed several roads 8 miles northeast of Amherst.

### Patrick County

|             |    |         |  |  |   |   |  |  |             |
|-------------|----|---------|--|--|---|---|--|--|-------------|
| 5 SE Stuart | 04 | 1537EST |  |  | 0 | 0 |  |  | Hail (0.88) |
|-------------|----|---------|--|--|---|---|--|--|-------------|

Thunderstorms during the afternoon of the 4th produced hail up to nickel size.

### Halifax County

|            |    |         |  |  |   |   |   |  |                   |
|------------|----|---------|--|--|---|---|---|--|-------------------|
| Scottsburg | 15 | 1810EST |  |  | 0 | 0 | 0 |  | Thunderstorm Wind |
|------------|----|---------|--|--|---|---|---|--|-------------------|

### Charlotte County

|         |    |         |  |  |   |   |   |  |                   |
|---------|----|---------|--|--|---|---|---|--|-------------------|
| Red Oak | 15 | 1820EST |  |  | 0 | 0 | 0 |  | Thunderstorm Wind |
|---------|----|---------|--|--|---|---|---|--|-------------------|

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## VIRGINIA, Southwest

Thunderstorms winds on the 15th downed trees in Red Oak, and downed large trees onto roads in Scottsburg.

**Pulaski County**  
6 NW Dublin to  
4 N Fairlawn

18 1810EST 2100EST 0 0 3K Flash Flood

**Pulaski County**  
Dublin

18 1820EST 2000EST 0 0 Flash Flood

**Pulaski County**  
Fairlawn

18 1820EST 2040EST 0 0 Flash Flood

Thunderstorm rains during the evening of the 18th produced significant flash flooding.

Heavy thunderstorm rains caused flash flooding in numerous locations along Back Creek, from 6 miles northwest of Dublin to 4 miles north of Fairlawn. Flooding affected mainly farm land with damage to fencing and gravel roads. One man was stranded in his car and rescued from near 4 miles northwest of Dublin.

Heavy thunderstorm rains also flooded and closed streets in Fairlawn and Dublin.

## WASHINGTON, Northeast

NONE REPORTED.

## WASHINGTON, Northwest

**Thurston County**  
Lacey

05 1700PST 0 0 20K Lightning

Lightning struck a garage, a DOT building and a tree in the Olympia area. The garage, filled with antiques, was destroyed. The DOT building lost power and the tree was split.

## WASHINGTON, Southeast

**Yakima County**  
18 W White Swan

13 0500PST 23 2359PST 0 0 Wild/Forest Fire

The Ewe Neck fire was a lightning sparked fire which burned 100 acres. A total of 250 firefighters fought this fire, along with retardant drops by planes and helicopters.

## WASHINGTON, Southwest

NONE REPORTED.

## WEST VIRGINIA, East

**Berkeley County**  
Inwood

27 1655EST 0 0 2K Thunderstorm Wind

Trees were downed and power outages were reported.

**Jefferson County**  
Harpers Ferry

27 1713EST 0 0 2K Thunderstorm Wind

Power lines were downed.

A thunderstorm with high winds moved through Berkeley and Jefferson counties between 7:30 and 8:30 PM EDT. Trees were downed and power outages were reported in Inwood. Power lines were downed in Harpers Ferry.

## WEST VIRGINIA, North

**Hancock County**  
2 E Moscow

03 1825EST 0 0 1K Thunderstorm Wind

Thunderstorm winds downed a large tree in the Tomlinson Run Park area, blocking traffic for a short period of time.

**Marshall County**  
Glendale

18 2220EST 0 0 1K Thunderstorm Wind

Thunderstorm winds downed a large tree onto State Route 86.

**Ohio County**  
Wheeling

18 2225EST 0 0 10K Thunderstorm Wind

Thunderstorm winds downed numerous trees and power lines.

**Preston County**  
Rowlesburg

27 1440EST 0 0 5K Thunderstorm Wind

Thunderstorm winds downed several large trees.

## WEST VIRGINIA, Southeast

NONE REPORTED.

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## WEST VIRGINIA, West

**WVZ005>011-013>020-024>040-046>047** Wayne - Cabell - Mason - Jackson - Wood - Pleasants - Tyler - Lincoln - Putnam - Kanawha - Roane - Wirt - Calhoun - Ritchie - Doddridge - Mingo - Logan - Boone - Clay - Braxton - Gilmer - Lewis - Harrison - Taylor - McDowell - Wyoming - Raleigh - Fayette - Nicholas - Webster - Upshur - Barbour - Pocahontas - Randolph

01 0000EST 0 0 Drought  
25 2300EST

The hot and dry pattern of August lingered into much of September. The hottest weather was during the first 10 days of the month. Readings in the 90s were common across the lowlands. Parkersburg had high temperature records of 97 degrees on the 7th, then 96 degrees on both the 8th and 9th. In the southern mountains, Beckley set or tied 5 daily record high temperatures during early September. By the second and third weeks of the month, drought conditions were surfacing. The remnants of Hurricane Isidore helped to generate widespread rains of 1 to 2 inches on the 26th and 27th. The rain combined with cooler temperatures, to increase surface water flows and reduce stress to the late season vegetation.

### **Raleigh County**

5 E Daniels 18 1735EST 0 0 1K Thunderstorm Wind

### **Harrison County**

Wolf Summit 18 2120EST 0 0 1K Hail (1.75)

### **Harrison County**

Clarksburg 18 2125EST 0 0 Hail (1.00)

## WISCONSIN, Northeast

### **Marathon County**

5.2 W Athens to 02 1704CST 0.2 75 0 0 Tornado (F0)  
5 W Athens 1706CST

### **Marathon County**

4 S Colby 02 1725CST 0 0 Hail (1.00)

### **Marathon County**

6 NW Wausau to 02 1735CST 5 200 0 1 1.3M Tornado (F1)  
4 NE Wausau 1743CST

### **Marathon County**

Wausau 02 1803CST 0 0 Thunderstorm Wind (G50)

### **Portage County**

2 W Junction City 02 1809CST 0 0 Hail (0.75)

### **Shawano County**

Aniwa 02 1810CST 0 0 Thunderstorm Wind (G52)

### **Waushara County**

10 E Redgranite 02 1940CST 0 0 Hail (0.75)

### **Winnebago County**

Eureka 02 1945CST 0 0 Hail (1.75)

### **Calumet County**

Chilton 02 2000CST 0 0 Thunderstorm Wind (G50)

Thunderstorms developed along a strong cold front that moved through Wisconsin during the evening. Some of the storms produced hail to golf ball size and winds as high as 60 mph. The high winds downed trees and power line, knocking out power to about 3,100 customers, mainly around Wausau (Marathon co.).

Two tornadoes developed from the storms. The first tornado briefly touched down about 5 miles west of Athens (Marathon co.) and caused minimal damage. The second tornado passed north of Wausau and stayed on the ground for about 5 miles, destroying two barns, a garage and a shed. It also snapped hundreds of trees, heavily damaged 6 homes and caused minor damage to 25 others. At least two vehicles traveling on Highway 51 were blown off the road. A trailer being towed by one of the vehicles was blown over and a large road sign hit the vehicle. The driver was injured and was transported to the hospital.

### **Lincoln County**

Merrill 23 1500CST 0 0 Hail (0.75)

### **Langlade County**

Neva 23 1543CST 0 0 Hail (0.75)

### **WIZ037**

**Waupaca**  
23 1550CST 0 0 Strong Wind

Isolated thunderstorms developed as a cold front moved through Wisconsin. The storms produced some large hail in north-central Wisconsin. Strong winds in the vicinity of a rain shower uprooted 10 oak trees at a cemetery on the south side of Waupaca (Waupaca co.).

### **Oneida County**

Minocqua to 30 1640CST 0 0 Hail (1.75)  
Woodruff 1645CST

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002                                 |      |                            |                           |                          |                      |         |                     |       |                         |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|-------------------------|
| Location                                       | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm      |
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                         |
| <b><u>WISCONSIN, Northeast</u></b>             |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Vilas County</b>                            |      |                            |                           |                          |                      |         |                     |       |                         |
| Arbor Vitae to<br>St Germain                   | 30   | 1647CST<br>1700CST         |                           |                          | 0                    | 0       |                     |       | Hail (2.50)             |
| <b>Forest County</b>                           |      |                            |                           |                          |                      |         |                     |       |                         |
| 4 N Newald                                     | 30   | 1720CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Vilas County</b>                            |      |                            |                           |                          |                      |         |                     |       |                         |
| Conover  | 30   | 1721CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.75)             |
| <b>Florence County</b>                         |      |                            |                           |                          |                      |         |                     |       |                         |
| Long Lake to<br>Tipler                         | 30   | 1729CST<br>1735CST         |                           |                          | 0                    | 0       |                     |       | Hail (1.75)             |
| <b>Florence County</b>                         |      |                            |                           |                          |                      |         |                     |       |                         |
| 1 W Florence to<br>Florence                    | 30   | 1757CST<br>1810CST         |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Florence County</b>                         |      |                            |                           |                          |                      |         |                     |       |                         |
| 5.5 SSE Spread Eagle to<br>5.5 SE Spread Eagle | 30   | 1810CST<br>1811CST         | 0.7                       | 400                      | 0                    | 0       | 50K                 |       | Tornado (F1)            |
| <b>Marathon County</b>                         |      |                            |                           |                          |                      |         |                     |       |                         |
| 1 S Spencer                                    | 30   | 1818CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Marinette County</b>                        |      |                            |                           |                          |                      |         |                     |       |                         |
| Niagara  | 30   | 1820CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G50) |
| <b>Wood County</b>                             |      |                            |                           |                          |                      |         |                     |       |                         |
| Marshfield                                     | 30   | 1828CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G52) |
| <b>Lincoln County</b>                          |      |                            |                           |                          |                      |         |                     |       |                         |
| 8 W Tomahawk to<br>4.5 W Tomahawk              | 30   | 1830CST<br>1835CST         | 3                         | 250                      | 0                    | 0       | 75K                 |       | Tornado (F2)            |
| <b>Marathon County</b>                         |      |                            |                           |                          |                      |         |                     |       |                         |
| 6 E Spencer                                    | 30   | 1830CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G50) |
| <b>Lincoln County</b>                          |      |                            |                           |                          |                      |         |                     |       |                         |
| 3 N Tomahawk                                   | 30   | 1842CST                    |                           |                          | 0                    | 0       |                     |       | Hail (1.00)             |
| <b>Oneida County</b>                           |      |                            |                           |                          |                      |         |                     |       |                         |
| Woodboro                                       | 30   | 1850CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G50) |
| <b>Lincoln County</b>                          |      |                            |                           |                          |                      |         |                     |       |                         |
| 6 E Bradley to<br>5 N Tomahawk                 | 30   | 1900CST<br>1918CST         |                           |                          | 0                    | 0       |                     |       | Hail (1.75)             |

Severe thunderstorms developed in unstable air in the vicinity of an east to west warm front that stretched across northern Wisconsin. These storms produced large hail, wind damage and two tornadoes. Hail to golf ball size covered the ground in the Minocqua area (Oneida co.) and golf ball to tennis ball size hail fell from Arbor Vitae (Vilas co.) to St. Germain (Vilas co.). The most significant wind damage was in southern Oneida county. In the Woodboro area (Oneida co.) a tree that was downed by high winds smashed a pickup truck.

A tornado touched down in southeast Florence county. It destroyed a pole barn, a garage that was under construction and 6 to 10 outbuildings in its path. It caused minor damage to a farm home and downed 150 to 250 trees and power lines, causing numerous power outages. The tornado tracked east-northeast across the Menominee river into upper Michigan where it continued to do damage.

Another tornado that touched down 8 miles west of Tomahawk (Lincoln co.) did significant damage, uprooting or snapping off thousands of trees along its path. A house in the path of the tornado sustained major structural damage. All outbuildings on the property were destroyed, a camping trailer was thrown 300 feet and a car was thrown into a tree, coming to rest at least 15 feet above the ground. Two barns were also destroyed.

The storms knocked out power to around 3,000 customers in the Tomahawk area (Lincoln co.) and about 600 customers in the Rhineland and Crandon areas.

## WISCONSIN, Northwest

|                        |    |                    |  |  |   |   |  |  |             |
|------------------------|----|--------------------|--|--|---|---|--|--|-------------|
| <b>Bayfield County</b> |    |                    |  |  |   |   |  |  |             |
| Port Wing              | 01 | 1130CST            |  |  | 0 | 0 |  |  | Hail (1.00) |
| <b>Douglas County</b>  |    |                    |  |  |   |   |  |  |             |
| South Range            | 01 | 1420CST            |  |  | 0 | 0 |  |  | Hail (0.88) |
| <b>Burnett County</b>  |    |                    |  |  |   |   |  |  |             |
| Siren                  | 01 | 2100CST<br>2300CST |  |  | 0 | 0 |  |  | Flash Flood |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002  |         |                            |                           |                          |                      |   |                     |  |                                      |
|---|---------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|--|--------------------------------------|
| Location  | Date    | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |  | Character of Storm                   |
| Killed  | Injured | Property                   | Crops                     |                          |                      |   |                     |  |                                      |
| <b>WISCONSIN, Northwest</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Heavy rain caused roads to be water-covered. A six-foot section of road was washed out.   |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Price County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| 4 S Kennan  | 02      | 1610CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G55)              |
| Trees were blown down and two silos were heavily damaged.   |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Douglas County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Patzau  | 30      | 1610CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.88)                          |
| <b>Price County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Phillips  | 30      | 1637CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)                          |
| <b>Price County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Park Falls  | 30      | 1641CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)                          |
| <b>Price County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Prentice  | 30      | 1842CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)                          |
| <b>WISCONSIN, Southeast</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Marquette County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Montello  | 02      | 2000CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G56)              |
| <b>Fond Du Lac County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| North Fond Du Lac   | 02      | 2005CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52)              |
| <b>Fond Du Lac County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Ripon   | 02      | 2005CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52)              |
| <b>Fond Du Lac County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| 1 NNW Brandon   | 02      | 2006CST                    | 0.1                       | 30                       | 0                    | 0 |                     |  | Tornado (F0)                         |
| A brief tornado spun up just north-northwest of the village of Brandon, as a cluster of severe storms moved east across Fond du Lac County. Law enforcement officials observed some tree damage.  |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Fond Du Lac County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| 1 N Eden  | 02      | 2030CST<br>2031CST         | 0.3                       | 75                       | 0                    | 0 | 750K                |  | Tornado (F1)                         |
| A tornado, rated as F1 with winds of about 78 to 87 knots (90 to 100 mph) damaged three, large, cover-all, dairy barns. Severe damage was noted on the western-most barn. In addition, some trees were uprooted or had limbs ripped off. The three barns were part of Fond du Lac's largest dairy farm. Luckily, only one of the 1400 dairy cows was injured.   |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Washington County</b>  |         |                            |                           |                          |                      |   |                     |  |                                      |
| West Bend   | 02      | 2105CST                    |                           |                          | 0                    | 0 | 2K                  |  | Thunderstorm Wind (G56)              |
| <b>Ozaukee County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Grafton   | 02      | 2115CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52)              |
| <b>Sheboygan County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| Sheboygan   | 02      | 2120CST                    |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G52)              |
| <b>Waukesha County</b>  |         |                            |                           |                          |                      |   |                     |  |                                      |
| North Lake to<br>Sussex   | 02      | 2140CST<br>2150CST         |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G58) <sup>M</sup> |
| Clusters or short lines of severe storms with powerful downburst winds and isolated tornadoes moved through parts of south-central and southeast Wisconsin on Labor Day September 2, 2002. Two tornadoes spun up in Fond du Lac County. Refer to those individual tornado events for details. Numerous large trees were toppled in some locations by the downburst winds, while broken tree branches snapped some power lines. Amateur radio operators in Waukesha County measured peak wind gust of 58 knots (67 mph). In West Bend (Washington Co.), a house trailer was blown over, and slightly damaged, by the powerful winds. |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>WIZ058&gt;059-064&gt;065-069&gt;070</b>  |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Dodge - Washington - Jefferson - Waukesha - Rock - Walworth</b>  |         |                            |                           |                          |                      |   |                     |  |                                      |
|   | 06      | 0400CST<br>0900CST         |                           |                          | 0                    | 0 |                     |  | Fog                                  |
| Dense fog developed overnight across parts of south-central and southeast Wisconsin. Visibilities were reduced to zero to 1/4 mile, resulting in a few vehicle accidents, and delayed airplane activities.  |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Jefferson County</b>   |         |                            |                           |                          |                      |   |                     |  |                                      |
| 2.7 SW Cold Spg   | 09      | 1440CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)                          |
| <b>Walworth County</b>  |         |                            |                           |                          |                      |   |                     |  |                                      |
| 2.5 SW Whitewater   | 09      | 1500CST                    |                           |                          | 0                    | 0 |                     |  | Hail (0.75)                          |
| An isolated, small cluster of slow-moving severe thunderstorms dumped some large hail.  |         |                            |                           |                          |                      |   |                     |  |                                      |
| <b>Racine County</b>  |         |                            |                           |                          |                      |   |                     |  |                                      |
| Burlington  | 19      | 1250CST                    |                           |                          | 0                    | 0 | 2K                  |  | Lightning                            |
| <b>Racine County</b>  |         |                            |                           |                          |                      |   |                     |  |                                      |
| Burlington to<br>3.8 SE Waterford   | 19      | 1255CST<br>1310CST         |                           |                          | 0                    | 0 |                     |  | Thunderstorm Wind (G56)              |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |      |                            |                           |                          |                      |         |                     |       |                         |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|-------------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm      |
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                         |
| <b><u>WISCONSIN, Southeast</u></b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Walworth County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| Walworth   | 19   | 1400CST<br>1600CST         |                           |                          | 0                    | 0       |                     |       | Urban/Sml Stream Fld    |
| <b>Kenosha County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Kenosha  | 19   | 1445CST<br>1630CST         |                           |                          | 0                    | 0       |                     |       | Urban/Sml Stream Fld    |
| <b>Washington County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| West Bend  | 19   | 1630CST                    |                           |                          | 0                    | 0       | 10K                 |       | Lightning               |
| Fast-moving, severe thunderstorms swept through southeast Wisconsin, resulting in powerful downburst winds that leveled trees in western Racine County. In addition, cloudbursts dumped 1.02 inches of rain in the city of Kenosha (Kenosha Co.), and 1.80 inches of rain in Lake Geneva within 30 to 60 minutes, triggering some urban flooding in both locations. Lightning struck a couple power stations (location unknown), resulting in the loss of electricity for 5370 residents in Racine and Kenosha counties. Lightning struck a West Bend (Washington Co.) home, triggering small fires and damaging structural and electrical components. Lightning struck near a Burlington (Racine Co.) home, blowing out a window, and toppling trees that side-swiped and lightly damaged two neighboring homes.  |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Kenosha County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Trevor   | 29   | 0600CST                    |                           |                          | 0                    | 0       | 1M                  |       | Lightning               |
| Lightning struck a cork-producing business and probably produced sparks that ignited insulation in the attic. A slow-burning fire resulted, and eventually is became a major fire later in the day. This western Kenosha County business sustained significant structural and contents damage. The time of the lightning strike is an estimation by fire department officials, since several rounds of thunderstorms moved through the western Kenosha County area during the early morning hours.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b><u>WISCONSIN, Southwest</u></b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Buffalo County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Alma   | 02   | 0025CST                    |                           |                          | 0                    | 0       | 0.50K               |       | Thunderstorm Wind (G52) |
| Law enforcement officials reported several trees blown down.   |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Taylor County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 1 NW Gilman to<br>7 W Medford  | 02   | 1610CST<br>1650CST         | 17                        | 75                       | 0                    | 0       | 3.9M                |       | Tornado (F2)            |
| <b>Taylor County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 3 S Perkiinstown   | 02   | 1640CST                    |                           |                          | 0                    | 0       | 30K                 |       | Thunderstorm Wind (G70) |
| <b>Taylor County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| 7 SE Perkiinstown  | 02   | 1640CST                    |                           |                          | 0                    | 0       | 70K                 |       | Thunderstorm Wind (G70) |
| <b>Clark County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 8 SE Owen  | 02   | 1710CST                    |                           |                          | 0                    | 0       |                     | 3.5K  | Hail (1.00)             |
| A tornado touched down about a mile northwest of Gilman (Taylor County) and moved southeast into the village a couple minutes later. A few trees and homes were lightly damaged before the tornado hit the Gilman school. The roof was blown off the school gymnasium, where the high school football team had been seeking cover a minute before moving into the hallways and interior rooms. Debris was blown from the school onto the nearby football field and into homes east of Gilman. The tornado kept tracking southeast into the Chequamegon National Forest, producing occasional house damage and knocking down hundreds of trees. The path of the storm crossed Trucker Lane, Winter Sports Road and damaged several homes near Sawyer Avenue as it increased in size and strength. The worst damage was when the top story of a two story house was completely removed along Sawyer Avenue shortly before the tornado dissipated before crossing Highway 64 west of Medford (Taylor County). There were no reports of deaths or injuries. This was the first confirmed tornado in Taylor County since July 30, 1977. |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Buffalo County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Mondovi  | 29   | 2105CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Clark County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 5 NW Neillsville   | 29   | 2221CST                    |                           |                          | 0                    | 0       |                     |       | Thunderstorm Wind (G52) |
| <b>Jackson County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 4 S Price  | 29   | 2245CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| Storm spotters and the public reported dime size hail and estimated wind gusts of 60 mph.  |      |                            |                           |                          |                      |         |                     |       |                         |
| <b>Buffalo County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| 10 N Waumandee   | 30   | 1625CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.75)             |
| <b>Buffalo County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Waumandee  | 30   | 1630CST                    |                           |                          | 0                    | 0       | 1.2K                | 3K    | Hail (1.25)             |
| <b>Taylor County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| Gilman   | 30   | 1645CST                    |                           |                          | 0                    | 0       | 1.5K                |       | Hail (1.75)             |
| <b>Taylor County</b>   |      |                            |                           |                          |                      |         |                     |       |                         |
| Perkiinstown   | 30   | 1704CST                    |                           |                          | 0                    | 0       | 1K                  |       | Hail (1.75)             |
| <b>Jackson County</b>  |      |                            |                           |                          |                      |         |                     |       |                         |
| Franklin   | 30   | 1710CST                    |                           |                          | 0                    | 0       |                     |       | Hail (0.88)             |

# Storm Data and Unusual Weather Phenomena

September 2002

| September 2002   |         |                            |                           |                          |                      |   |                     |    |                         |
|--|---------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|----|-------------------------|
| Location   | Date    | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |    | Character of Storm      |
| Killed   | Injured | Property                   | Crops                     |                          |                      |   |                     |    |                         |
| <b><u>WISCONSIN, Southwest</u></b>   |         |                            |                           |                          |                      |   |                     |    |                         |
| <b>Trempealeau County</b>  |         |                            |                           |                          |                      |   |                     |    |                         |
| Ettrick  | 30      | 1710CST                    |                           |                          | 0                    | 0 |                     |    | Hail (0.75)             |
| <b>Taylor County</b>   |         |                            |                           |                          |                      |   |                     |    |                         |
| 2 SW Chelsea to<br>1.5 SW Chelsea  | 30      | 1745CST<br>1750CST         | 0.5                       | 100                      | 0                    | 0 | 20K                 | 5K | Tornado (F0)            |
| <b>Taylor County</b>   |         |                            |                           |                          |                      |   |                     |    |                         |
| 2 NE Chelsea   | 30      | 1750CST                    |                           |                          | 0                    | 0 | 5K                  |    | Thunderstorm Wind (G60) |
| <b>Taylor County</b>   |         |                            |                           |                          |                      |   |                     |    |                         |
| 3 E Westboro   | 30      | 1758CST                    |                           |                          | 0                    | 0 | 2.5K                |    | Thunderstorm Wind (G60) |
| <b>Clark County</b>  |         |                            |                           |                          |                      |   |                     |    |                         |
| 5 SW Loyal   | 30      | 1800CST                    |                           |                          | 0                    | 0 | 0.75K               |    | Hail (1.00)             |
| <b>Clark County</b>  |         |                            |                           |                          |                      |   |                     |    |                         |
| 5 SW Loyal   | 30      | 1800CST                    |                           |                          | 0                    | 0 | 0.70K               |    | Thunderstorm Wind (G58) |
| <b>Clark County</b>  |         |                            |                           |                          |                      |   |                     |    |                         |
| 7 S Loyal to<br>6.5 S Loyal  | 30      | 1802CST<br>1805CST         | 0.2                       | 50                       | 0                    | 0 |                     |    | Tornado (F0)            |
| <b>Clark County</b>  |         |                            |                           |                          |                      |   |                     |    |                         |
| 7 E Loyal  | 30      | 1815CST                    |                           |                          | 0                    | 0 | 3.5K                |    | Hail (1.75)             |
| A tornado touched down 2 miles southwest of the town of Chelsea (Taylor County). The tornado caused damage to a residence near the intersection of Fox Avenue and Settlement Road. A barn and numerous trees were also downed. There were no injuries or deaths reported. The tornado was on the ground for about one-half mile and was approximately 100 yards wide as it moved northeast. The parent thunderstorm continued northeast after the tornado lifted, causing numerous funnels and sporadic tree damage from about 1.5 miles southwest of Chelsea, through 3 miles east of Westboro (Taylor County). These downburst winds were estimated at 60 to 70 mph. However, no further tornadoes were confirmed along this path. Another tornado touched down briefly in a field just south of Loyal (Clark County), but did no damage. Spotters, law enforcement officials and amateur radio operators also reported hail ranging in size from dimes to as large as golf balls. |         |                            |                           |                          |                      |   |                     |    |                         |
| <b><u>WISCONSIN, West</u></b>  |         |                            |                           |                          |                      |   |                     |    |                         |
| <b>Polk County</b>   |         |                            |                           |                          |                      |   |                     |    |                         |
| Osceola  | 01      | 0130CST<br>0700CST         |                           |                          | 0                    | 0 | 400K                |    | Flash Flood             |
| More than five inches of rain fell within a few hours, causing Osceola Creek to rise. Approximately 75 feet of the Upper Millpond Dam was breached, and a significantly greater flow of water headed toward State Highway 35. It overtopped the highway and flooded Falls Trailer Park, where 12 mobile homes had to be evacuated. One mobile home was permanently damaged and a cabin was destroyed. Most damage was to roads and other infrastructure.   |         |                            |                           |                          |                      |   |                     |    |                         |
| <b>St. Croix County</b>  |         |                            |                           |                          |                      |   |                     |    |                         |
| Hudson   | 01      | 2200CST                    |                           |                          | 0                    | 0 |                     |    | Thunderstorm Wind (G55) |
| Large trees down.  |         |                            |                           |                          |                      |   |                     |    |                         |
| <b>St. Croix County</b>  |         |                            |                           |                          |                      |   |                     |    |                         |
| Baldwin  | 01      | 2215CST                    |                           |                          | 0                    | 0 |                     |    | Thunderstorm Wind (G55) |
| Large trees down.  |         |                            |                           |                          |                      |   |                     |    |                         |
| <b>Pierce County</b>   |         |                            |                           |                          |                      |   |                     |    |                         |
| 4 SE River Falls   | 01      | 2235CST                    |                           |                          | 0                    | 0 |                     |    | Thunderstorm Wind (G52) |
| Trees down across road.  |         |                            |                           |                          |                      |   |                     |    |                         |
| <b>Dunn County</b>   |         |                            |                           |                          |                      |   |                     |    |                         |
| 5 NW Menomonie to<br>2 NE Menomonie  | 01      | 2255CST                    |                           |                          | 0                    | 0 |                     |    | Thunderstorm Wind (G55) |
| Few trees down.  |         |                            |                           |                          |                      |   |                     |    |                         |
| <b>Pierce County</b>   |         |                            |                           |                          |                      |   |                     |    |                         |
| River Falls to<br>Ellsworth  | 01      | 2255CST                    |                           |                          | 0                    | 0 |                     |    | Thunderstorm Wind (G55) |
| Scattered trees down.  |         |                            |                           |                          |                      |   |                     |    |                         |
| <b>Pepin County</b>  |         |                            |                           |                          |                      |   |                     |    |                         |
| Pepin  | 01      | 2315CST                    |                           |                          | 0                    | 0 |                     |    | Thunderstorm Wind (G50) |
| Large tree branches down.  |         |                            |                           |                          |                      |   |                     |    |                         |
| <b>Chippewa County</b>   |         |                            |                           |                          |                      |   |                     |    |                         |
| Chippewa Falls to<br>6 E Chippewa Falls  | 01      | 2325CST                    |                           |                          | 0                    | 0 |                     |    | Thunderstorm Wind (G55) |
| Scattered trees down.  |         |                            |                           |                          |                      |   |                     |    |                         |

# Storm Data and Unusual Weather Phenomena

September 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Killed | Injured | Estimated<br>Damage<br>Property | Crops | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|--------|---------|---------------------------------|-------|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--------|---------|---------------------------------|-------|--------------------|

## WISCONSIN, West

### **Rusk County**

**1.5 WSW Ladysmith to 2 S Ingram**    **02**    **1522CST**    **16**    **440**    **0**    **27**    **25M**    **Tornado (F3)**  
**1550CST**

The first tornadic supercell to rake Wisconsin this day started just west of Ladysmith and tore through the downtown before moving into rural parts of eastern Rusk County. Injury totals fluctuated at first, but Rusk County Emergency Management stated there were approximately 27 injuries, none more serious than a broken leg. The NWS performed a damage survey the next day, and the most severe damage, rated F3, was in downtown Ladysmith. In this area 4 blocks wide and 16 blocks long, 40 buildings were destroyed and 159 damaged. One church was blown off its foundation, although during the damage survey, it was apparent that it had been barely attached to the foundation. A pickup truck was also picked up and thrown into a tree. Two old brick buildings collapsed. As the tornado reached the east side of Ladysmith, it weakened to F2 status. Once it left Ladysmith, the tornado continued on an eastward path, striking a number of rural farm houses and producing mostly F1 damage until it dissipated.

### **Chippewa County**

#### **North Portion**

**05**    **1600CST**    **0**    **0**    **50K**    **Flash Flood**  
**1800CST**

Four to seven inches of rain within a few hours resulted in water out of several creeks and over a number of roads. A street and culvert were washed out in New Auburn, with one or two homes flooded.

### **Rusk County**

#### **South Portion**

**05**    **1600CST**    **0**    **0**    **Flash Flood**  
**1800CST**

Four to seven inches of rain within a few hours resulted in several creeks out of their banks. Water flooded six roads, from Big Bend township (the Island Lake area) to Grant and Grow townships (a few miles south and southeast of Ladysmith).

## WYOMING, Central and West

### **Fremont County**

#### **18 S Lander**

**01**    **0000MST**    **0**    **0**    **Wild/Forest Fire**  
**03**    **1500MST**

The Pass Creek Wildfire continued to burn into early September. The fire burned 13,433 acres in August and September.

### **Lincoln County**

#### **20 N Kemmerer**

**01**    **0000MST**    **0**    **0**    **Wild/Forest Fire**  
**08**    **1500MST**

The Commissary Ridge Wildfire was started by lightning. The fire burned 3,500 acres. Also, one summer home and one outbuilding were destroyed.

### **Fremont County**

#### **(Riv)Riverton Rgnl A**

**05**    **1323MST**    **0**    **0**    **Thunderstorm Wind (G50) <sup>M</sup>**

### **Fremont County**

#### **Shoshoni**

**05**    **1405MST**    **0**    **0**    **Thunderstorm Wind (G52)**

### **Hot Springs County**

#### **Thermopolis**

**05**    **1415MST**    **0**    **0**    **Thunderstorm Wind (G52)**  
**1420MST**

The thunderstorm winds downed trees.

## WYOMING, Extreme Southwest

NONE REPORTED.

## WYOMING, North Central

NONE REPORTED.

## WYOMING, Northeast

### **Weston County**

#### **6 N Clareton**

**03**    **1845MST**    **0**    **0**    **25K**    **Thunderstorm Wind (G58)**

Severe thunderstorm winds damaged a barn wall and flipped over ranch trailers north of Clareton.

## WYOMING, Southeast

### **Carbon County**

#### **12 S Encampment**

**17**    **1020MST**    **1**    **0**    **Lightning**

Lightning struck a tree and woman standing under it at the Pickaroon Campground in Medicine Bow National Forest.

F51UT

# Storm Data and Unusual Weather Phenomena

March 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## Additions/Corrections

### SOUTH CAROLINA, Northwest

#### York County

|                  |    |                    |  |  |   |   |  |  |             |
|------------------|----|--------------------|--|--|---|---|--|--|-------------|
| 4 SE Mc Connells | 31 | 1430EST<br>1438EST |  |  | 0 | 0 |  |  | Hail (1.00) |
|------------------|----|--------------------|--|--|---|---|--|--|-------------|

# Storm Data and Unusual Weather Phenomena

June 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## Additions/Corrections

### GEORGIA, Northeast

#### **Rabun County**

|              |           |                            |  |  |          |          |  |  |                    |
|--------------|-----------|----------------------------|--|--|----------|----------|--|--|--------------------|
| <b>Tiger</b> | <b>04</b> | <b>1653EST<br/>1703EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Hail (0.75)</b> |
|--------------|-----------|----------------------------|--|--|----------|----------|--|--|--------------------|

#### **Rabun County**

|              |           |                            |  |  |          |          |  |  |                                |
|--------------|-----------|----------------------------|--|--|----------|----------|--|--|--------------------------------|
| <b>Tiger</b> | <b>04</b> | <b>1653EST<br/>1703EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Thunderstorm Wind (G50)</b> |
|--------------|-----------|----------------------------|--|--|----------|----------|--|--|--------------------------------|

A few trees were blown down.

### OHIO, Southwest

#### **Hardin County**

|               |           |                            |  |  |          |          |           |  |                                |
|---------------|-----------|----------------------------|--|--|----------|----------|-----------|--|--------------------------------|
| <b>Kenton</b> | <b>15</b> | <b>1300EST<br/>1302EST</b> |  |  | <b>0</b> | <b>0</b> | <b>5K</b> |  | <b>Thunderstorm Wind (G50)</b> |
|---------------|-----------|----------------------------|--|--|----------|----------|-----------|--|--------------------------------|

A large limb fell on an automobile, causing extensive damage to the windshield.

#### **Hamilton County**

|                        |           |                            |  |  |          |          |  |  |                    |
|------------------------|-----------|----------------------------|--|--|----------|----------|--|--|--------------------|
| <b>2 S Forest Park</b> | <b>25</b> | <b>1437EST<br/>1439EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Hail (0.75)</b> |
|------------------------|-----------|----------------------------|--|--|----------|----------|--|--|--------------------|

#### **Highland County**

|                      |           |                            |  |  |          |          |           |  |                                |
|----------------------|-----------|----------------------------|--|--|----------|----------|-----------|--|--------------------------------|
| <b>5 W Hillsboro</b> | <b>25</b> | <b>1450EST<br/>1452EST</b> |  |  | <b>0</b> | <b>0</b> | <b>5K</b> |  | <b>Thunderstorm Wind (G50)</b> |
|----------------------|-----------|----------------------------|--|--|----------|----------|-----------|--|--------------------------------|

Several trees were knocked down.

#### **OHZ077-080**

#### **Hamilton - Highland**

|  |           |                            |  |  |          |          |  |  |              |
|--|-----------|----------------------------|--|--|----------|----------|--|--|--------------|
|  | <b>25</b> | <b>1450EST<br/>1545EST</b> |  |  | <b>0</b> | <b>0</b> |  |  | <b>Flood</b> |
|--|-----------|----------------------------|--|--|----------|----------|--|--|--------------|

There were numerous reports of high water over roadways across the south central and southwest portions of Ohio as isolated, slow moving thunderstorms moved across the area during the afternoon. The heavy rains washed out the ground underneath a house on a hillside in Westwood, leaving it on the verge of collapse.

#### **Mercer County**

|               |           |                            |  |  |          |          |            |  |                          |
|---------------|-----------|----------------------------|--|--|----------|----------|------------|--|--------------------------|
| <b>Celina</b> | <b>25</b> | <b>1532EST<br/>1538EST</b> |  |  | <b>0</b> | <b>1</b> | <b>50K</b> |  | <b>Thunderstorm Wind</b> |
|---------------|-----------|----------------------------|--|--|----------|----------|------------|--|--------------------------|

High winds knocked down over 100 trees in the city, including twenty which were two feet in diameter or larger. There were several reports of trees falling on cars and homes producing minor damage. A woman sustained fractured ribs when a large branch struck her car during the storm. The storm also produced dime sized hail throughout town.

#### **Auglaize County**

|                |           |                            |  |  |          |          |           |  |                                |
|----------------|-----------|----------------------------|--|--|----------|----------|-----------|--|--------------------------------|
| <b>Minster</b> | <b>25</b> | <b>1600EST<br/>1602EST</b> |  |  | <b>0</b> | <b>0</b> | <b>5K</b> |  | <b>Thunderstorm Wind (G50)</b> |
|----------------|-----------|----------------------------|--|--|----------|----------|-----------|--|--------------------------------|

Numerous trees fell near Minster and to the south of Saint Marys.

# Storm Data and Unusual Weather Phenomena

July 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## Additions/Corrections

### SOUTH CAROLINA, Northwest

#### **Pickens County**

|                |    |         |  |  |   |   |  |  |             |
|----------------|----|---------|--|--|---|---|--|--|-------------|
| 5 S Dacusville | 21 | 1738EST |  |  | 0 | 0 |  |  | Hail (0.75) |
|----------------|----|---------|--|--|---|---|--|--|-------------|

### TEXAS, South Central

#### **TXZ189**

#### **Kendall**

|    |         |  |  |  |   |   |  |  |       |
|----|---------|--|--|--|---|---|--|--|-------|
| 02 | 0300CST |  |  |  | 0 | 0 |  |  | Flood |
| 05 | 1930CST |  |  |  |   |   |  |  |       |

The Guadalupe River crested at Comfort at 31.33 feet on July 4 at 0930CST, where flood stage is 21.0 feet.



# Storm Data and Unusual Weather Phenomena

August 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## Additions/Corrections

### MICHIGAN, Upper

#### **Luce County**

|  |    |         |  |  |   |   |  |  |                         |
|--|----|---------|--|--|---|---|--|--|-------------------------|
| 20 N Newberry  | 01 | 0700EST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G52) |
| A 60 mph wind gust broke off a 16 inch diameter tree branch that fell on a motor home. |    |         |  |  |   |   |  |  |                         |

#### **Menominee County**

|                                 |    |         |  |  |   |   |  |  |                         |
|---------------------------------|----|---------|--|--|---|---|--|--|-------------------------|
| Hermansville                    | 01 | 0710EST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G65) |
| Numerous trees were blown down. |    |         |  |  |   |   |  |  |                         |

#### **Delta County**

|                                    |    |         |  |  |   |   |  |  |             |
|------------------------------------|----|---------|--|--|---|---|--|--|-------------|
| Escanaba                           | 01 | 0736EST |  |  | 0 | 0 |  |  | Hail (1.75) |
| Golf ball sized hail was reported. |    |         |  |  |   |   |  |  |             |

#### **Delta County**

|                                 |    |         |  |  |   |   |  |  |             |
|---------------------------------|----|---------|--|--|---|---|--|--|-------------|
| 4 E Bark River                  | 01 | 0800EST |  |  | 0 | 0 |  |  | Hail (0.88) |
| Nickel sized hail was reported. |    |         |  |  |   |   |  |  |             |

#### **Delta County**

|   |    |                    |  |  |   |   |  |  |             |
|---|----|--------------------|--|--|---|---|--|--|-------------|
| Escanaba  | 01 | 0839EST<br>1045EST |  |  | 0 | 0 |  |  | Flash Flood |
| Heavy rain flooded the intersection of US-2, M-35 and US-41 with a foot of water. |    |                    |  |  |   |   |  |  |             |

#### **Marquette County**

|                                       |    |         |  |  |   |   |  |  |             |
|---------------------------------------|----|---------|--|--|---|---|--|--|-------------|
| Republic                              | 01 | 0850EST |  |  | 0 | 0 |  |  | Hail (0.75) |
| Three quarter inch hail was reported. |    |         |  |  |   |   |  |  |             |

#### **Gogebic County**

|                             |    |         |  |  |   |   |  |  |             |
|-----------------------------|----|---------|--|--|---|---|--|--|-------------|
| Watersmeet                  | 01 | 1015EST |  |  | 0 | 0 |  |  | Hail (1.00) |
| One inch hail was reported. |    |         |  |  |   |   |  |  |             |

#### **Iron County**

|                                    |    |         |  |  |   |   |  |  |             |
|------------------------------------|----|---------|--|--|---|---|--|--|-------------|
| 16 N Iron River                    | 01 | 1130EST |  |  | 0 | 0 |  |  | Hail (1.50) |
| Golf ball sized hail was reported. |    |         |  |  |   |   |  |  |             |

#### **Gogebic County**

|   |    |         |  |  |   |   |  |  |                         |
|---|----|---------|--|--|---|---|--|--|-------------------------|
| Watersmeet to<br>8 S Watersmeet                       | 01 | 1145EST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G70) |
| Numerous trees and power lines were down along US-45. |    |         |  |  |   |   |  |  |                         |

#### **Gogebic County**

|                                       |    |         |  |  |   |   |  |  |             |
|---------------------------------------|----|---------|--|--|---|---|--|--|-------------|
| Watersmeet                            | 01 | 1150EST |  |  | 0 | 0 |  |  | Hail (1.00) |
| Walnut sized hail covered the ground. |    |         |  |  |   |   |  |  |             |

#### **Baraga County**

|  |    |         |  |  |   |   |  |  |                         |
|--|----|---------|--|--|---|---|--|--|-------------------------|
| 8 SE Three Lakes                                 | 01 | 1155EST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G70) |
| Numerous 18 inch diameter trees were blown down. |    |         |  |  |   |   |  |  |                         |

#### **Marquette County**

|   |    |         |  |  |   |   |  |  |                         |
|---|----|---------|--|--|---|---|--|--|-------------------------|
| Michigamme                                    | 01 | 1203EST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G60) |
| Large trees were blown down on Brooks Street. |    |         |  |  |   |   |  |  |                         |

#### **Iron County**

|                                  |    |         |  |  |   |   |  |  |             |
|----------------------------------|----|---------|--|--|---|---|--|--|-------------|
| 12 NE Amasa                      | 01 | 1209EST |  |  | 0 | 0 |  |  | Hail (1.00) |
| Quarter sized hail was reported. |    |         |  |  |   |   |  |  |             |

#### **Gogebic County**

|                                 |    |         |  |  |   |   |  |  |                         |
|---------------------------------|----|---------|--|--|---|---|--|--|-------------------------|
| 7 SE Watersmeet                 | 01 | 1254EST |  |  | 0 | 0 |  |  | Thunderstorm Wind (G65) |
| Numerous trees were blown down. |    |         |  |  |   |   |  |  |                         |

# Storm Data and Unusual Weather Phenomena

August 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## Additions/Corrections

### MICHIGAN, Upper

#### **Delta County**

17 N Isabella 01 1450EST 0 0 Thunderstorm Wind (G65)

Nine inch diameter trees were blown down.

#### **Delta County**

18 NW Nahma 01 1450EST 0 0 Thunderstorm Wind (G65)

Numerous trees were blown down.

#### **Schoolcraft County**

Steuben 01 1452EST 0 0 Thunderstorm Wind (G65)

A one foot diameter tree was blown down.

#### **Luce County**

15 N Newberry 01 1525EST 0 0 Thunderstorm Wind (G60)

A tree was blown down on M-123.

Widespread severe thunderstorms struck Upper Michigan on August 1st as a strong surface low pressure center moved northeast into Ontario and its attendant warm and cold fronts interacted with a warm, moist and unstable airmass over the northwest Great Lakes. Thunderstorms first developed in Upper Michigan during the pre-dawn hours over the west, then continued off and on through the day before exiting Luce and Schoolcraft Counties late in the afternoon. There were numerous reports of wind damage, large hail, and torrential flooding rains. Wind gusts estimated as high as 80 mph near Houghton peeled a roof off a warehouse, overturned a truck, and downed numerous trees and power lines. One thunderstorm bombarded Escanaba with golf ball-sized hail and dropped enough rain to inundate the intersection of US-2, M-35, and US-41 with a foot of water. Nearby Gladstone measured 2.06 inches of rain...and Wetmore in Alger County logged 2.40 inches in a short time.

### NORTH CAROLINA, Northwest and North Central

#### **Stokes County**

Meadows 15 1628EST 0 0 Hail (0.75)

Thunderstorms during the afternoon of the 15th produced hail up to dime size.

#### **Stokes County**

Meadows 18 1835EST 0 0 0 Thunderstorm Wind

#### **Rockingham County**

3 SW Monroeton 18 1845EST 0 0 0 Thunderstorm Wind

Thunderstorm winds downed trees in Meadows, blocking several roads, and 3 miles southwest of Monroeton, blocking Route 158.

### NORTH CAROLINA, Southwest

#### **Catawba County**

3 NE Hickory to Conover 24 1705EST 0 0 3K Thunderstorm Wind (G50)

Trees and powerlines were blown down in and around Hickory.

#### **Catawba County**

Sherrills Ford 24 1740EST 0 0 Thunderstorm Wind (G50)

Several trees were blown down near Duke Power Plant.

#### **NCZ082**

to Union 31 1230EST 0 0 Flood

Northwest Portion

1700EST

Pebble Creek overflowed its banks, flooding a golf course in the northwest part of the county. Many roads were also flooded.

### OHIO, Southwest

#### **Warren County**

2 E Lebanon 11 1545EST 0 0 Hail (1.00)

1549EST

# Storm Data and Unusual Weather Phenomena

August 2002

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## Additions/Corrections

### OHIO, Southwest

#### **Shelby County**

|               |    |                    |  |  |   |   |    |  |                                |
|---------------|----|--------------------|--|--|---|---|----|--|--------------------------------|
| <b>Russia</b> | 11 | 1620EST<br>1624EST |  |  | 0 | 0 | 3K |  | <b>Thunderstorm Wind (G50)</b> |
|---------------|----|--------------------|--|--|---|---|----|--|--------------------------------|

Large trees were blown down across the southwest part of the county.

#### **Auglaize County**

|                     |    |                    |  |  |   |   |  |  |                    |
|---------------------|----|--------------------|--|--|---|---|--|--|--------------------|
| <b>1 N St Marys</b> | 11 | 1623EST<br>1626EST |  |  | 0 | 0 |  |  | <b>Hail (1.50)</b> |
|---------------------|----|--------------------|--|--|---|---|--|--|--------------------|

#### **Clermont County**

|                |    |                    |  |  |   |   |    |  |                                |
|----------------|----|--------------------|--|--|---|---|----|--|--------------------------------|
| <b>Milford</b> | 11 | 1627EST<br>1633EST |  |  | 0 | 0 | 5K |  | <b>Thunderstorm Wind (G50)</b> |
|----------------|----|--------------------|--|--|---|---|----|--|--------------------------------|

Trees were downed across portions of Union and Miami Townships.

#### **Hamilton County**

|                      |    |                    |  |  |   |   |    |  |                                |
|----------------------|----|--------------------|--|--|---|---|----|--|--------------------------------|
| <b>Mt Washington</b> | 11 | 1635EST<br>1639EST |  |  | 0 | 0 | 3K |  | <b>Thunderstorm Wind (G50)</b> |
|----------------------|----|--------------------|--|--|---|---|----|--|--------------------------------|

Trees were knocked down.

#### **Darke County**

|                   |    |                    |  |  |   |   |    |  |                    |
|-------------------|----|--------------------|--|--|---|---|----|--|--------------------|
| <b>Gettysburg</b> | 11 | 1650EST<br>1654EST |  |  | 0 | 0 | 3K |  | <b>Hail (1.75)</b> |
|-------------------|----|--------------------|--|--|---|---|----|--|--------------------|

Golf ball size hail fell across town. Trees were also downed in several parts of town.

#### **OHZ043-051**

#### **Shelby - Miami**

|  |    |                    |  |  |   |   |  |  |              |
|--|----|--------------------|--|--|---|---|--|--|--------------|
|  | 11 | 1700EST<br>1755EST |  |  | 0 | 0 |  |  | <b>Flood</b> |
|--|----|--------------------|--|--|---|---|--|--|--------------|

Strong thunderstorms remained nearly stationary across southwest Shelby county and northwest Miami county during the late afternoon. Radar estimated three to five inches of rainfall over a two hour period across these areas. The torrential rainfall caused high water on county roadways and street flooding in Piqua and Covington.

#### **Ross County**

|                    |    |                    |  |  |   |   |    |  |                                |
|--------------------|----|--------------------|--|--|---|---|----|--|--------------------------------|
| <b>Chillicothe</b> | 11 | 1805EST<br>1810EST |  |  | 0 | 0 | 3K |  | <b>Thunderstorm Wind (G50)</b> |
|--------------------|----|--------------------|--|--|---|---|----|--|--------------------------------|

Trees were downed on the north and east sides of town.

#### **Mercer County**

|                 |    |                    |  |  |   |   |    |  |                                |
|-----------------|----|--------------------|--|--|---|---|----|--|--------------------------------|
| <b>Rockford</b> | 11 | 1833EST<br>1836EST |  |  | 0 | 0 | 3K |  | <b>Thunderstorm Wind (G50)</b> |
|-----------------|----|--------------------|--|--|---|---|----|--|--------------------------------|

Trees and large limbs were knocked down across town.

### VIRGINIA, Southwest

#### **Charlotte County**

|               |    |         |  |  |   |   |   |  |                          |
|---------------|----|---------|--|--|---|---|---|--|--------------------------|
| <b>Phenix</b> | 18 | 1635EST |  |  | 0 | 0 | 0 |  | <b>Thunderstorm Wind</b> |
|---------------|----|---------|--|--|---|---|---|--|--------------------------|

#### **Salem (C)**

|                  |    |         |  |  |   |   |   |  |                          |
|------------------|----|---------|--|--|---|---|---|--|--------------------------|
| <b>Salem (C)</b> | 18 | 1830EST |  |  | 0 | 0 | 0 |  | <b>Thunderstorm Wind</b> |
|------------------|----|---------|--|--|---|---|---|--|--------------------------|

Thunderstorm winds on the afternoon of the 18th downed trees in Phenix, blocking route 727, and in Salem, blocking several roads.

## Reference Notes:

Fatality Codes: For events that include a fatality, there is a code containing the gender, age and fatality location at the end of the event narrative.

1<sup>st</sup> letter: Gender (M/F) – 2<sup>nd</sup> numbers: Age – 3<sup>rd</sup> letters Fatality location (see table below)

Example: M51IW – Male, 51 years of age, fatality occurred In Water.

### Fatality Location Abbreviations:

|    |                              |    |                    |
|----|------------------------------|----|--------------------|
| BF | Ball Field                   | MH | Mobile Home        |
| BO | Boating                      | OT | Other              |
| BU | Business                     | OU | Outside/Open Areas |
| CA | Camping                      | PH | Permanent Home     |
| EQ | Heavy Equipment/Construction | SC | School             |
| GF | Golfing                      | TE | Telephone          |
| IW | In Water                     | UT | Under Tree         |
| LS | Long Span Roof               | VE | Vehicle            |

### List of Acronyms:

|      |   |
|------|---|
| NWS  | - National Weather Service  |
| NOAA | - National Oceanic and Atmospheric Administration   |
| WCM  | - Warning Coordination Meteorologist – The meteorologist at each NWS Office responsible for reporting severe weather events |
| LST  | - Local Standard Time      Storm Data attempts to always use “Standard Time”  |
| EST  | - Eastern Standard Time   |
| EDT  | - Eastern Daylight Time   |
| CST  | - Central Standard Time   |
| CDT  | - Central Daylight Time   |
| PST  | - Pacific Standard Time   |
| PDT  | - Pacific Daylight Time   |

### Other Notes:

- ❑ When listing wind speed values under “Character of Storm”, ex. High Wind (G81), the G indicates a “Gust” which is a peak 5-second averaged wind speed in Knots (kts). 1 kt. = 1.152 mph. This number can be either E (estimated) by damage caused, or M (measured) by known calibrated anemometers. Ex. (M61) = measured 61 knots or E(75) = estimated at 75 knots.
- ❑ When listing hail size under “Character of Storm”, ex. Hail (2.25), the hail size is given in inches and hundredths of inches.
- ❑ When listing property and crop damage, the figures indicated are the best guess made by the NWS from the available sources of information at the time of the printing.

# **The Saffir-Simpson Scale**

## **Category One Hurricane:**

Winds 74-95 mph (64-82 kt or 119-153 kph). Storm surge generally 4-5 ft above normal. No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Some damage to poorly constructed signs. Also, some coastal road flooding and minor pier damage.

## **Category Two Hurricane:**

Winds 96-110 mph (83-95 kt or 154-177 kph). Storm surge generally 6-8 feet above normal. Some roofing material, door, and window damage of buildings. Considerable damage to shrubbery and trees with some trees blown down. Considerable damage to mobile homes, poorly constructed signs, and piers. Coastal and low-lying escape routes flood 2-4 hours before arrival of the hurricane center. Small craft in unprotected anchorages break moorings.

## **Category Three Hurricane:**

Winds 111-130 mph (96-113 kt or 178-209 kph). Storm surge generally 9-12 ft above normal. Some structural damage to small residences and utility buildings with a minor amount of curtainwall failures. Damage to shrubbery and trees with foliage blown off trees and large trees blown down. Mobile homes and poorly constructed signs are destroyed. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the hurricane center. Flooding near the coast destroys smaller structures with larger structures damaged by battering of floating debris. Terrain continuously lower than 5 ft above mean sea level may be flooded inland 8 miles (13 km) or more. Evacuation of low-lying residences with several blocks of the shoreline may be required.

## **Category Four Hurricane:**

Winds 131-155 mph (114-135 kt or 210-249 kph). Storm surge generally 13-18 ft above normal. More extensive curtainwall failures with some complete roof structure failures on small residences. Shrubs, trees, and all signs are blown down. Complete destruction of mobile homes. Extensive damage to doors and windows. Low-lying escape routes may be cut by rising water 3-5 hours before arrival of the hurricane center. Major damage to lower floors of structures near the shore. Terrain lower than 10 ft above sea level may be flooded requiring massive evacuation of residential areas as far inland as 6 miles (10 km).

## **Category Five Hurricane:**

Winds greater than 155 mph (135 kt or 249 kph). Storm surge generally greater than 18 ft above normal. Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. All shrubs, trees, and signs blown down. Complete destruction of mobile homes. Severe and extensive window and door damage. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the hurricane center. Major damage to lower floors of all structures located less than 15 ft above sea level and within 500 yards of the shoreline. Massive evacuation of residential areas on low ground within 5-10 miles (8-16 km) of the shoreline may be required.

## The Fujita Scale

| F-Scale | Intensity     | Wind Speed (mph) | Typical Damage (Suggested)   |
|---------|---------------|------------------|--|
| F0      | Gale Tornado  | 40 - 72          | Tree branches broken, chimneys damaged, shallow-rooted trees pushed over; sign boards damaged or destroyed, outbuildings and sheds destroyed   |
| F1      | Moderate      | 73 - 112         | Roof surfaces peeled off, mobile homes pushed off foundations or overturned, moving autos pushed off the roads, garages may be destroyed.<br>Category 1-2 hurricane wind speed   |
| F2      | Significant   | 113 - 157        | Roofs blown off frame houses; mobile homes rolled and/or destroyed, train boxcars pushed over; large trees snapped or uprooted; airborne debris can cause damage.<br>Category 3-4 hurricane wind speed   |
| F3      | Severe        | 158 - 206        | Roofs and walls torn off well constructed houses; trains overturned; large trees uprooted, can knock down entire forest of trees.<br>Category 5 hurricane wind speed   |
| F4      | Devastating   | 207 - 260        | Well-constructed frame houses leveled; structures with weak foundations blown off some distance; automobiles thrown, large airborne objects can cause significant damage.  |
| F5      | Incredible    | 261 - 318        | Brick, stone and cinderblock buildings destroyed, most debris is carried away by tornadic winds, large and heavy objects can be hurled in excess of 100 meters, trees debarked, asphalt peeled off of roads, steel reinforced concrete structures badly damaged. |
| F6      | Inconceivable | 319 - 379        | These winds are very unlikely. The small area of damage they might produce would probably not be recognizable along with the damage produced by F4 and F5 wind speeds that would surround the F6 winds.  |



### Typical F0 Tornado Damage

Note the trees are stripped of leaves, but the trees remain standing. Only light roof damage and a few missing shingles.



### Typical F1 Tornado Damage

Note the uprooted trees and missing shingles from the roof. There is significant roof damage.



### **Typical F2 Tornado Damage**

This home is missing its entire roof but the exterior walls remain intact. Some of the stronger hardwood trees remain standing.



### **Typical F3 Tornado Damage**

This home is missing the entire roof as well as some of the exterior walls. Trees are blown over or snapped near the base and outbuildings are destroyed.



### **Typical F4 Tornado Damage**

This home is almost completely obliterated, with no walls standing. The debris from the home is where the house once stood.



### **Typical F5 Tornado Damage**

These homes have been completely removed from their original locations. The debris field has been scattered some distance from their foundation.



### **Typical F5 Tornado Damage**

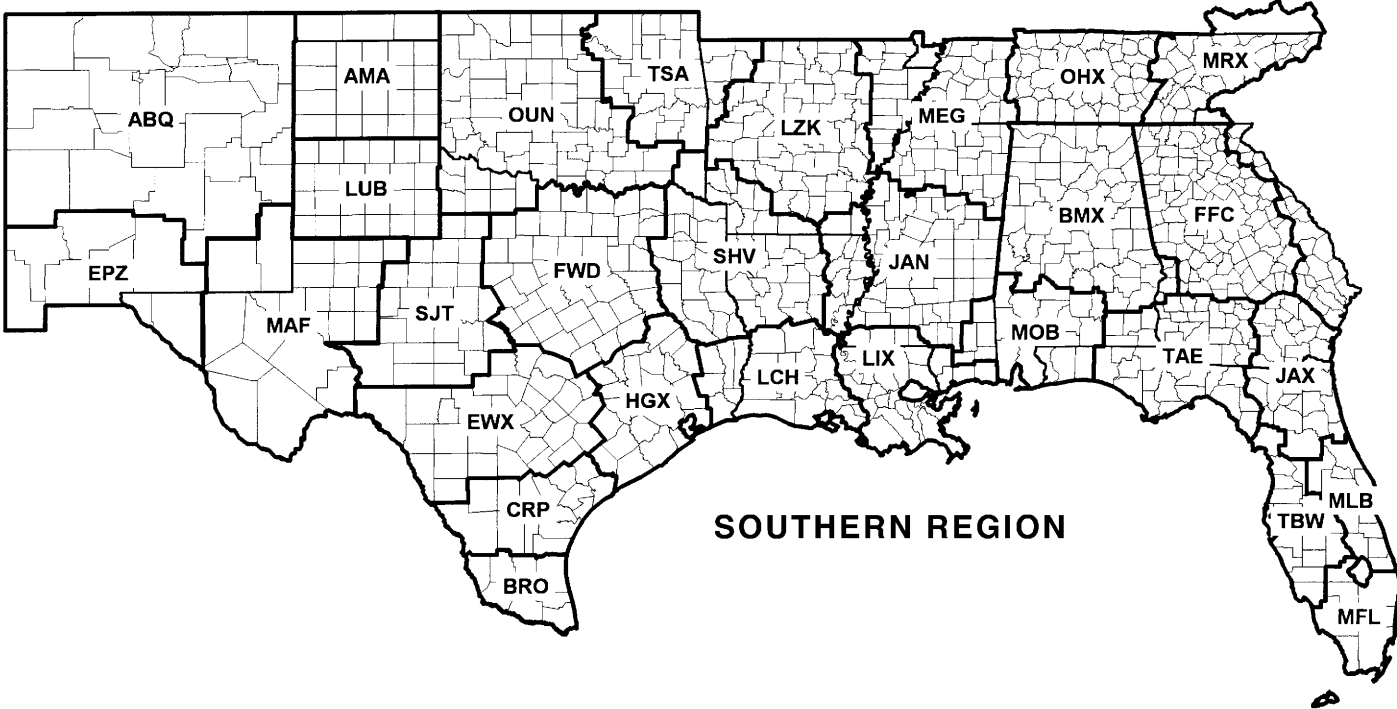
The asphalt surface has been peeled off of this road.

(All photographs courtesy of Brian Smith, Meteorologist, National Weather Service, Valley NE.)

COUNTY WARNING & FORECAST AREAS - MODERNIZED NWS

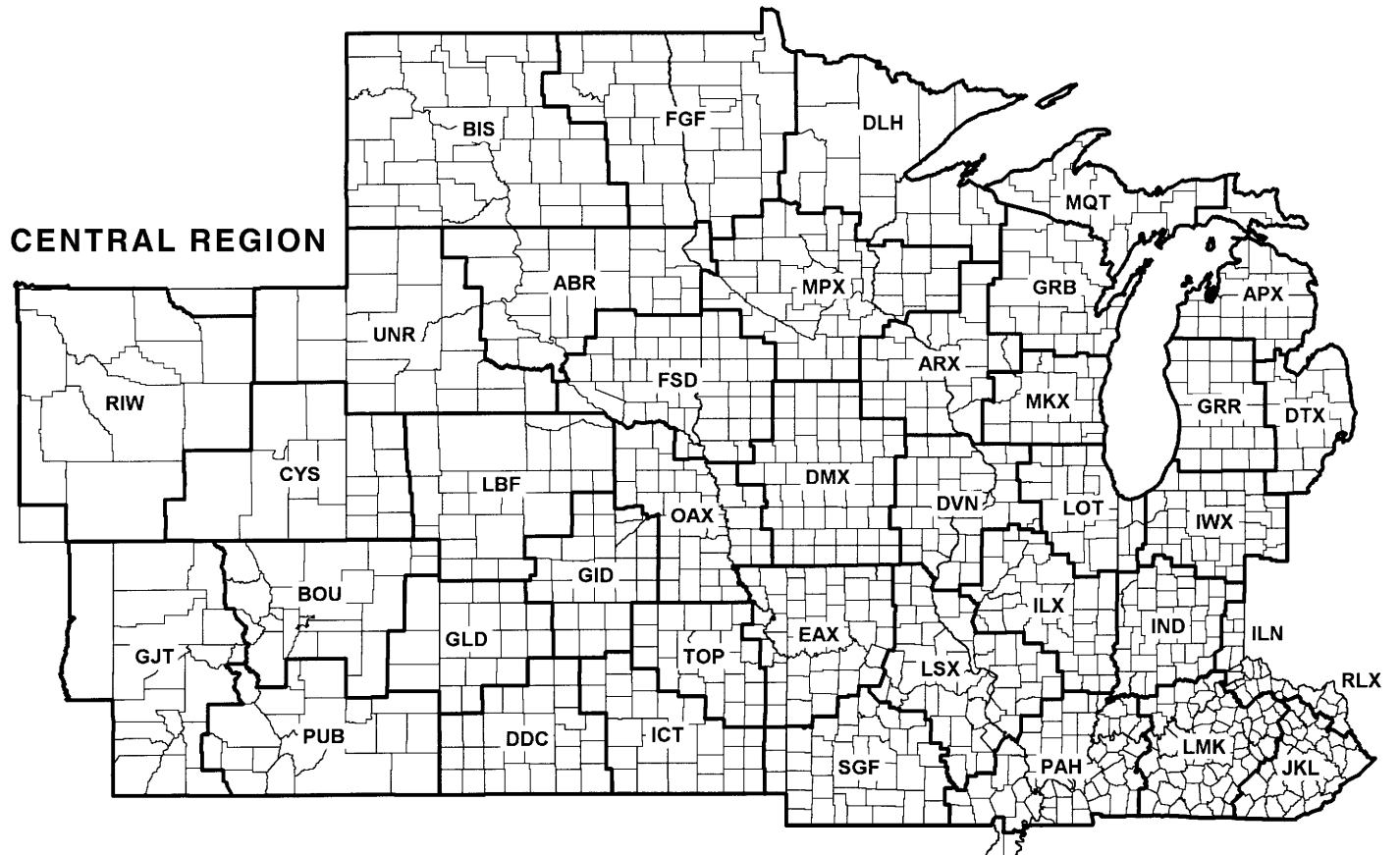
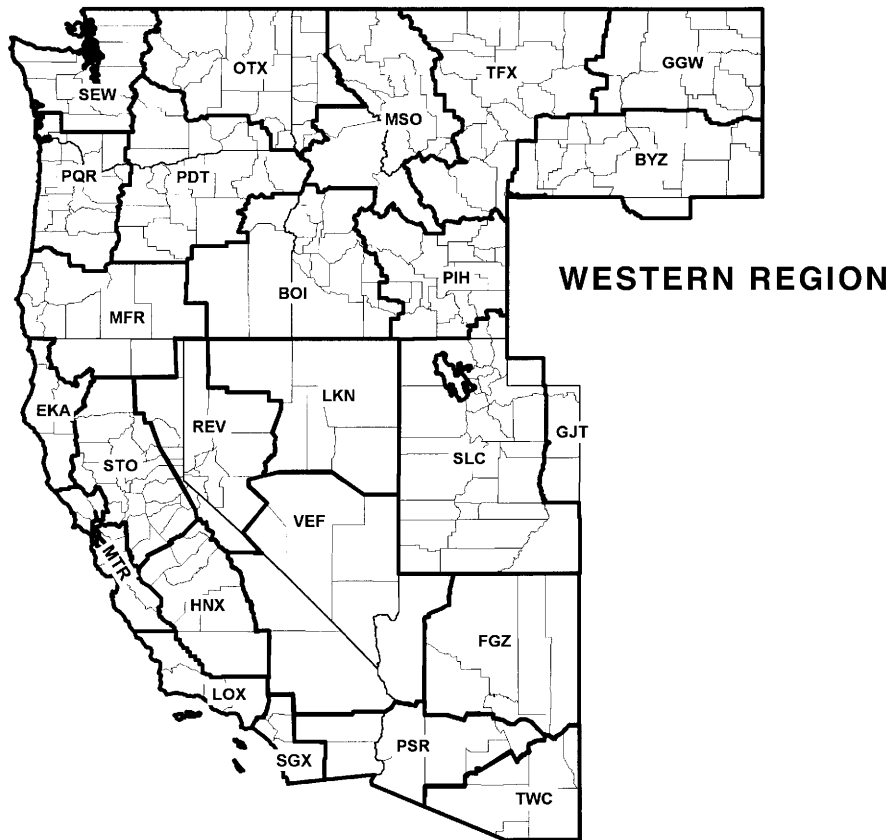


EASTERN REGION

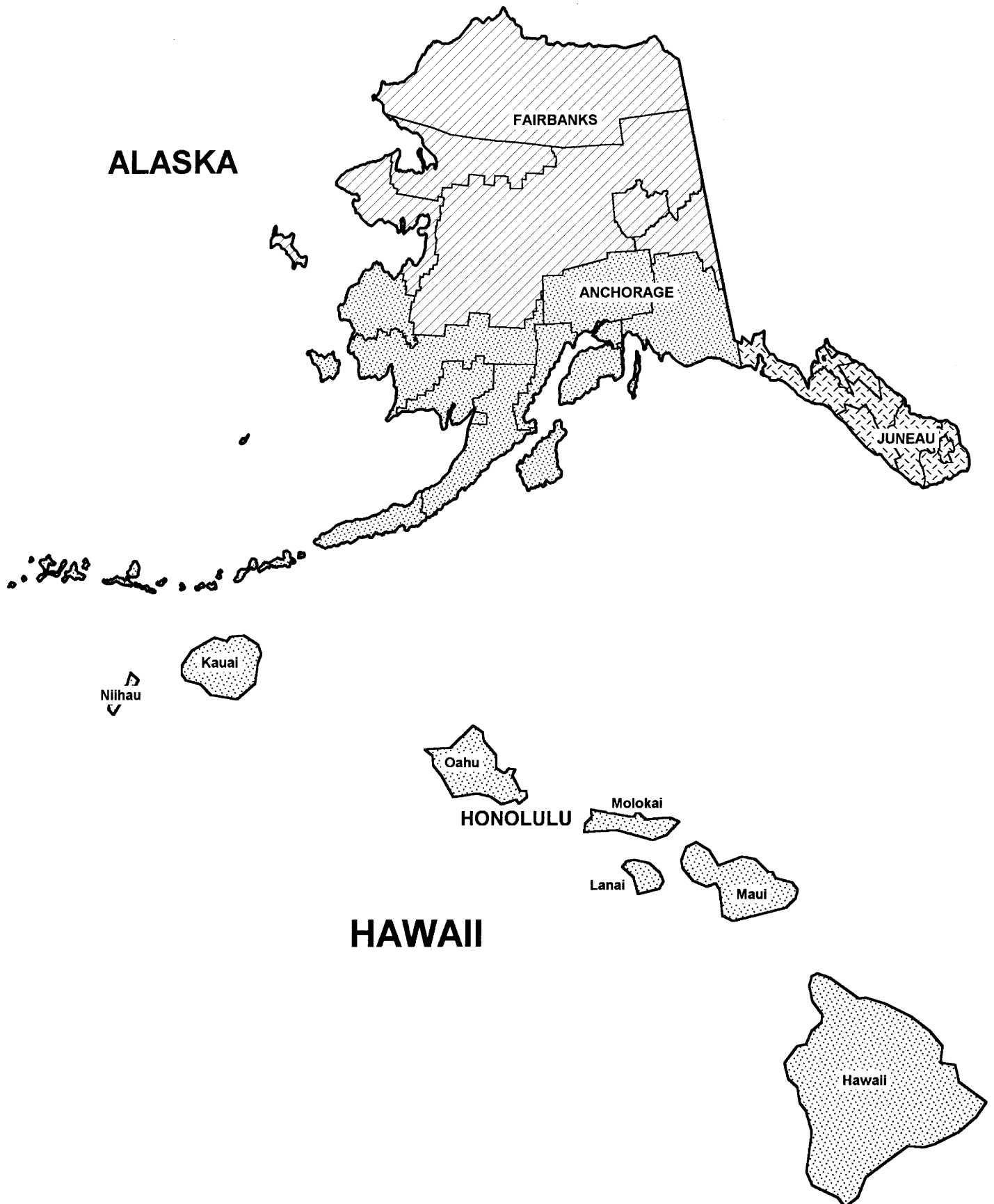


SOUTHERN REGION

# COUNTY WARNING & FORECAST AREAS - MODERNIZED NWS



# MODERNIZED COUNTY WARNING AREAS



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